MATERIAL SAFETY DATA SHEETS

MSDS

951 CALIFORNIA BLVD., NAPA, CA 94559 TELEPHONE (707) 252-3478 FAX (707) 252-1763

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MATERIAL SAFETY DATA SHEETS

MSDS SHEET: HOW TO READ

IMPORTANT: Any Chemical or Material having a warning label, stating the chemical or material may be HARMFUL or FATAL must have a MATERIAL SAFETY DATA SHEET (MSDS).

The "Chemical or Material" manufacturer must supply the MATERIAL SAFETY DATA SHEET. Write a letter to the manufacturer requesting the MSDS Sheets. Keep a copy of the letter in the MSDS Sheet Binder, until the MSDS Sheets arrive.

TRAINING INFORMATION: "HOW TO READ AN MSDS SHEET"

Doctors Information: MSDS Sheets list all of the chemicals used in manufacturing the chemical. The physical effects and health hazards if exposed to the chemical. The emergency first aid procedures and how the doctor treats the employee after breathing, swallowing or splashing the chemicals in their eyes. "Eye Washing System" is required for all companies using any corrosive or hazardous chemicals.

Safety Equipment: MSDS Sheets list all of the safety and protective equipment required for the safe useage and handling of hazardous chemicals.

Handling Procedures: MSDS Sheets describe how to safely handle hazardous chemicals and also the emergency clean up procedures.

Storing Procedures: MSDS Sheets describe how to safely store the chemicals and fire fighting procedures. All flammable chemicals should be stored in metal or fire proof containers. Hazardous chemicals should be stored, in a Double Lined Container System, to prevent accidental spillage.

Labeling Procedures: Chemicals must be properly marked and labeled, if the chemical is not in its original container.

Labeling requirements:
- o Name of the chemical.
- o Warning of hazards = "Flammable"
- o Name and address of manufacturer.

Disposal Procedures: Every city and county has a different method for disposing of chemicals. You must, establish the correct and legal method to dispose of your chemicals.

REQUESTING MSDS SHEETS

DATE: _____

COMPANY NAME: _____

ADDRESS: _____

CITY, ST. ZIP: _____

PHONE NUMBER: _____ DATE CALLED: _____

Dear Sir,

California Senate Bill 198: Requires that all employers, obtain MATERIAL SAFETY DATA SHEETS (MSDS Sheets) for all the hazardous chemicals or materials, that are used by their employees.

Our company, uses hazardous chemicals or materials that are sold or manufactured by your company. We are requesting that you send us, the following Material Safety Data Sheets (MSDS Sheets).

Send MSDS Sheets to:

Company Name: _____

Address: _____

City, St. Zip: _____

Attn: _____

Phone Number: _____

MSDS Sheets Requested:

_____

_____

_____

_____

_____

_____

Thank You,

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

CHEVRON and TEXACO REGULAR UNLEADED GASOLINES

Product Number(s): CPS201000 [See Section 16 for Additional Product Numbers]
Synonyms: Calco Regular Unleaded Gasoline, Chevron Regular Unleaded Gasoline, Texaco Unleaded Gasoline
Company Identification
Chevron Products Company
Marketing, MSDS Coordinator
6001 Bollinger Canyon Road
San Ramon, CA 94583
United States of America

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
ChevronTexaco Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
Technical Information: (510) 242-5357

SPECIAL NOTES: This MSDS applies to: all motor gasoline.

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Gasoline	86290-81-5	100 %volume
Benzene	71-43-2	0.1 - 4.9 %volume
Toluene (methylbenzene)	108-88-3	1 - 17 %volume
Ethyl benzene	100-41-4	0.1 - 3 %volume
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	1330-20-7	1 - 15 %volume
Butane	106-97-8	1 - 12 %volume
Heptane	142-82-5	1 - 4 %volume
Hexane	110-54-3	1 - 5 %volume
Cyclohexane	110-82-7	1 - 3 %volume
Methylcyclohexane	108-87-2	1 - 2 %volume
Pentane, 2,2,4-trimethyl- (Isooctane)	540-84-1	1 - 13 %volume
Naphthalene	91-20-3	0.1 - 2 %volume
Ethanol	64-17-5	0 - 10 %volume
Methyl tert-butyl ether (MTBE)	1634-04-4	0 - 15 %volume
Tertiary amyl methyl ether (TAME)	994-05-8	0 - 17 %volume
Ethyl tert-butyl ether (ETBE)	637-92-3	0 - 18 %volume

Motor gasoline is considered a mixture by EPA under the Toxic Substances Control Act (TSCA). The refinery streams used to blend motor gasoline are all on the TSCA Chemical Substances Inventory. The appropriate CAS number for refinery blended motor gasoline is 86290-81-5. The product specifications of motor gasoline sold in your area will depend on applicable Federal and State regulations.

SECTION 3 HAZARDS IDENTIFICATION

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EMERGENCY OVERVIEW

- EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE
- HARMFUL OR FATAL IF SWALLOWED - MAY CAUSE LUNG DAMAGE IF SWALLOWED
- VAPOR HARMFUL
- CAUSES EYE AND SKIN IRRITATION
- LONG-TERM EXPOSURE TO VAPOR HAS CAUSED CANCER IN LABORATORY ANIMALS
- KEEP OUT OF REACH OF CHILDREN
- TOXIC TO AQUATIC ORGANISMS

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IMMEDIATE HEALTH EFFECTS

Eye: Contact with the eyes causes irritation. Symptoms may include pain, tearing, reddening, swelling and impaired vision.

Skin: Contact with the skin causes irritation. Skin contact may cause drying or defatting of the skin. Contact with the skin is not expected to cause an allergic skin response. Symptoms may include pain, itching, discoloration, swelling, and blistering. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Breathing this material at concentrations above the recommended exposure limits may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER HEALTH EFFECTS:

Reproduction and Birth Defects: This material is not expected to cause birth defects or other harm to the developing fetus based on animal data.

Cancer: Prolonged or repeated exposure to this material may cause cancer. Gasoline has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Whole gasoline exhaust has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP) and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains ethylbenzene which has been classified as a Group 2B carcinogen (possibly carcinogenic to

humans) by the International Agency for Research on Cancer (IARC).
Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).
See Section 11 for additional information. Risk depends on duration and level of exposure.

SECTION 4 FIRST AID MEASURES

Eye: Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get medical attention if irritation persists.
Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.
Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person. If swallowed, get medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.
Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.
Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

SECTION 5 FIRE FIGHTING MEASURES

See Section 7 for proper handling and storage.

FIRE CLASSIFICATION:
OSHA Classification (29 CFR 1910.1200): Flammable liquid.

NFPA RATINGS: Health: 1 Flammability: 3 Reactivity: 0

FLAMMABLE PROPERTIES:
Flashpoint: (Tagliabue Closed Cup ASTM D56) < -45 °C (< -49 °F)
Autoignition: > 280 °C (> 536 °F)
Flammability (Explosive) Limits (% by volume in air): Lower: 1.4 Upper: 7.6 (Typical)

EXTINGUISHING MEDIA: Dry Chemical, CO2, AFFF Foam or alcohol resistant foam if >15% volume polar solvents (oxygenates).

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: Use water spray to cool fire-exposed containers and to protect personnel. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible,

observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required. This material is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Petroleum Exclusion. Therefore, releases to the environment may not be reportable under CERCLA.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. This product presents an extreme fire hazard. Liquid very quickly evaporates, even at low temperatures, and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Do not store in open or unlabeled containers. Use only as a motor fuel. Do not use for cleaning, pressure appliance fuel, or any other such use. Never siphon gasoline by mouth.
Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling. Keep out of the reach of children.
Unusual Handling Hazards: WARNING! Do not use as portable heater or appliance fuel. Toxic fumes may accumulate and cause death.
General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'. Improper filling of portable gasoline containers creates danger of fire. Only dispense gasoline into approved and properly labeled gasoline containers. Always place portable containers on the ground. Be sure pump nozzle is in contact with the container while filling. Do not use a nozzle's lock-open device. Do not fill portable containers that are inside a vehicle or truck/trailer bed.
General Storage Information: DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces . USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to

harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.
Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Nitrile Rubber, Polyurethane, Viton.
Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors.
When used as a fuel, this material can produce carbon monoxide in the exhaust. Determine if airborne concentrations are below the occupational exposure limit for carbon monoxide. If not, wear an approved positive-pressure air-supplying respirator.
Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.
Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Benzene	ACGIH	.5 ppm (weight)	2.5 ppm (weight)	--	Skin A1
Benzene	OSHA SRS	1 ppm (weight)	5 ppm (weight)	--	--
Benzene	OSHA Z-2	10 ppm (weight)	--	25 ppm (weight)	--
Butane	ACGIH	800 ppm (weight)	--	--	--
Cyclohexane	ACGIH	100 ppm (weight)	--	--	--
Cyclohexane	OSHA Z-1	1050 mg/m3	--	--	--
Ethanol	ACGIH	1000 ppm (weight)	--	--	A4
Ethanol	OSHA Z-1	1900 mg/m3	--	--	--
Ethyl benzene	ACGIH	100 ppm (weight)	125 ppm (weight)	--	A3
Ethyl benzene	OSHA Z-1	435 mg/m3	--	--	--
Ethyl tert-butyl ether (ETBE)	ACGIH	5 ppm (weight)	--	--	--
Heptane	ACGIH	400 ppm (weight)	500 ppm (weight)	--	--
Heptane	OSHA Z-1	2000 mg/m3	--	--	--
Hexane	ACGIH	50 ppm (weight)	--	--	Skin
Hexane	OSHA Z-1	1800 mg/m3	--	--	--
Methyl tert-butyl ether (MTBE)	ACGIH	50 ppm (weight)	--	--	A3
Methyl tert-butyl ether (MTBE)	CVX	--	50 ppm	--	--

Methylcyclohexane	ACGIH	400 ppm (weight)	--	--	--
Methylcyclohexane	OSHA Z-1	2000 mg/m3	--	--	--
Naphthalene	ACGIH	10 ppm	15 ppm	--	A4 Skin
Naphthalene	OSHA Z-1	50 mg/m3	--	--	--
Pentane, 2,2,4-trimethyl- (Isooctane)	ACGIH	300 ppm (weight)	--	--	--
Pentane, 2,2,4-trimethyl- (Isooctane)	OSHA Z-1	2350 mg/m3	--	--	--
Tertiary amyl methyl ether (TAME)	ACGIH	20 ppm (weight)	--	--	--
Tertiary amyl methyl ether (TAME)	CVX	--	50 ppm	--	--
Toluene (methylbenzene)	ACGIH	50 ppm (weight)	--	--	Skin A4
Toluene (methylbenzene)	OSHA Z-2	200 ppm (weight)	--	300 ppm (weight)	--
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	ACGIH	100 ppm (weight)	150 ppm (weight)	--	A4
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	OSHA Z-1	435 mg/m3	--	--	--

Refer to the OSHA Benzene Standard (29 CFR 1910.1028) and Table Z-2 for detailed training, exposure monitoring, respiratory protection and medical surveillance requirements before using this product.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Colorless to yellow
Physical State: Liquid
Odor: Petroleum odor
pH: Not Applicable
Vapor Pressure: 5 psi - 15 psi (Typical) @ 37.8 °C (100 °F)
Vapor Density (Air = 1): 3 - 4 (Typical)
Boiling Point: 37.8 °C (100°F) - 204.4°C (400°F) (Typical)
Solubility: Insoluble in water; miscible with most organic solvents.
Freezing Point: Not Applicable
Melting Point: Not Applicable
Specific Gravity: 0.7 g/ml - 0.8 g/ml @ 15.6 °C (60.1°F) (Typical)
Viscosity: <1 SUS @ 37.8 °C (100°F)

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: None known (None expected)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The Draize eye irritation mean score in rabbits for a 24-hour exposure was: 0/110.
Skin Irritation: For a 4-hour exposure, the Primary Irritation Index (PII) in rabbits is: 4.8/8.0.

Skin Sensitization: This material did not cause skin sensitization reactions in a Buehler guinea pig test.
Acute Dermal Toxicity: LD50: >3.75g/kg (rabbit).
Acute Oral Toxicity: LD50: >5 ml/kg (rat)
Acute Inhalation Toxicity: 4 hour(s) LD50: >20000mg/m3 vapor (rat).
Subchronic Effects: Exposure of rats for 13 weeks (6 hr/day for 5 days/week) to the light ends of gasoline (up to 20,000 mg/m3) resulted in minimal responses of toxicity. There were no indications of neurotoxicity based morphological, functional and biochemical indices. There was also no evidence of immunotoxicity in the rats. However, when rats were exposed to gasoline vapor containing ethanol up to 20,000 mg/m3 there was evidence of both humoral immune suppression and mild astrogliosis.
Reproduction and Birth Defects: Exposure of rats to the light ends of gasoline at up to 20,000 mg/m3 had generally no impact upon reproductive abilities and did not cause birth defects.
Genetic Toxicity: Gasoline was not mutagenic, with or without activation, in the Ames assay (Salmonella typhimurium), Saccharamyces cerevisesae, or mouse lymphoma assays. In addition, point mutations were not induced in human lymphocytes. Gasoline was not mutagenic when tested in the mouse dominant lethal assay. Administration of gasoline to rats did not cause chromosomal aberrations in their bone marrow cells. Inhalation exposure of rats to the light ends of gasoline caused increased sister chromatid exchange in their peripheral white blood cells but did not cause an increase in micronucleated red blood cells in their bone marrow.
ADDITIONAL TOXICOLOGY INFORMATION:
Gasolines are highly volatile and can produce significant concentrations of vapor at ambient temperatures. Gasoline vapor is heavier than air and at high concentrations may accumulate in confined spaces to present both safety and heath hazards. When vapor exposures are low, or short duration and infrequent, such as during refueling and tanker loading/unloading, neither total hydrocarbon nor components such as benzene are likely to result in any adverse health effects. In situations such as accidents or spills where exposure to gasoline vapor is potentially high, attention should be paid to potential toxic effects of specific components. Information about specific components in gasoline can be found in Sections 2, 8 and 15 of this MSDS. More detailed information on the health hazard of specific gasoline components can be obtained calling the ChevronTexaco Emergency Information Center (see Section 1 for phone numbers).
Pathological misuse of solvents and gasoline, involving repeated and prolonged exposure to high concentrations of vapor is a significant exposure on which there are many reports in the medical literature. As with other solvents, persistent abuse involving repeated and prolonged exposures to high concentrations of vapor has been reported to result in central nervous system damage and eventually, death. In a study in which ten human volunteers were exposed for 30 minutes to approximately 200, 500 or 1000 ppm concentrations of gasoline vapor, irritation of the eyes was the only significant effect observed, based on both subjective and objective assessments.
Lifetime inhalation of wholly vaporized unleaded gasoline at 2056 ppm has caused increased liver tumors in female mice and kidney cancer in male rats. In their 1988 review of carcinogenic risk from gasoline, The International Agency for Research on Cancer (IARC) noted that, because published epidemiology studies did not include any exposure data, only occupations where gasoline exposure may have occurred were reviewed. These included gasoline service station attendants and automobile mechanics. IARC also noted that there was no opportunity to separate effects of combustion products from those of gasoline itself. Although IARC allocated gasoline a final overall classification of Group 2B, i.e. possibly carcinogenic to humans, this was based on limited evidence in experimental animals plus supporting evidence including the presence in gasoline of benzene. The actual evidence for carcinogenicity in humans was considered inadequate.
To explore the health effects of workers potentially exposed to gasoline vapors in the marketing and distribution sectors of the petroleum industry, the American Petroleum Institute sponsored a cohort mortality study (Publication 4555), a nested case-control study (Publication 4551), and an exposure assessment study (Publication 4552). Histories of exposure to gasoline were reconstructed for cohort of more than 18,000 employees from four companies for the time period between 1946 and 1985. The results of the cohort mortality study indicated that there was no increased mortality from either kidney cancer or leukemia among marketing and marine distribution employees who were exposed to gasoline in

the petroleum industry, when compared to the general population. More importantly, based on internal comparisons, there was no association between mortality from kidney cancer or leukemia and various indices of gasoline exposure. In particular, neither duration of employment, duration of exposure, age at first exposure, year of first exposure, job category, cumulative exposure, frequency of peak exposure, nor average intensity of exposure had any effect on kidney cancer or leukemia mortality. The results of the nested case-control study confirmed the findings of the original cohort study. That is, exposure to gasoline at the levels experienced by this cohort of distribution workers is not a significant risk factor for leukemia (all cell types), acute myeloid leukemia, kidney cancer or multiple myeloma.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
96 hour(s) LC50: 8.3 mg/l (Cyprinodon variegatus)
96 hour(s) LC50: 1.8 mg/l (Mysidopsis bahia)
48 hour(s) LC50: 3.0 mg/l (Daphnia magna)
96 hour(s) LC50: 2.7 mg/l (Oncorhynchus mykiss)
This material is expected to be toxic to aquatic organisms. The bulk of the available literature on gasoline relates to the environmental impact of monoaromatic (BTEX) and diaromatic (naphthalene, methylnaphthalenes) constituents. In general, non-oxygenated gasoline exhibits some short-term toxicity to freshwater and marine organisms, especially under closed vessel or flow-through exposure conditions in the laboratory. The components which are the most prominent in the water soluble fraction and cause aquatic toxicity, are also highly volatile and can be readily biodegraded by microorganisms.

Gasoline studies have been conducted in the laboratory under a variety of test conditions with a range of fish and invertebrate species. An even more extensive database is available on the aquatic toxicity of individual aromatic constituents. The majority of published studies do not identify the type of gasoline evaluated, or even provide distinguishing characteristics such as aromatic content or presence of lead alkyls. As a result, comparison of results among studies using open and closed vessels, different ages and species of test animals and different gasoline types, is difficult.

ENVIRONMENTAL FATE
This material is expected to be readily biodegradable. Following spillage, the more volatile components of gasoline will be rapidly lost, with concurrent dissolution of these and other constituents into the water. Factors such as local environmental conditions (temperature, wind, mixing or wave action, soil type, etc), photo-oxidation, biodegradation and adsorption onto suspended sediments, can contribute to the weathering of spilled gasoline.

The aqueous solubility of non-oxygenated unleaded gasoline, based on analysis of benzene, toluene, ethylbenzene+xylenes and naphthalene, is reported to be 112 mg/l. Solubility data on individual gasoline constituents also available.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: GASOLINE,3,UN1203,II

IMO/IMDG Shipping Description: GASOLINE,3,UN1203,II,FLASH POINT SEE SECTION 5

ICAO/IATA Shipping Description: GASOLINE, 3, UN1203, II

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:

1.	Immediate (Acute) Health Effects:	YES
2.	Delayed (Chronic) Health Effects:	YES
3.	Fire Hazard:	YES
4.	Sudden Release of Pressure Hazard:	NO
5.	Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Benzene	01-1, 02, 03, 04, 05, 06, 07
Butane	05, 06, 07
Cyclohexane	03, 05, 06, 07
Ethanol	05, 06, 07
Ethyl benzene	01-2B, 03, 05, 06, 07
Gasoline	01-2B, 07
Heptane	05, 06, 07
Hexane	03, 05, 06, 07
Methyl tert-butyl ether (MTBE)	03, 05, 06, 07
Methylcyclohexane	05, 06, 07
Naphthalene	01-2B, 2, 03, 04, 05, 06, 07
Pentane, 2,2,4-trimethyl- (Isooctane)	05, 06, 07
Toluene (methylbenzene)	03, 04, 05, 06, 07
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	03, 05, 06, 07

CERCLA REPORTABLE QUANTITIES(RQ)/EPCRA 302 THRESHOLD PLANNING QUANTITIES(TPQ):

Component	Component RQ	Component TPQ	Product RQ
Benzene	10 lbs	None	186 lbs
Butane	100 lbs	None	725 lbs

Cyclohexane	1000 lbs	None	34188 lbs
Ethanol	100 lbs	None	1934 lbs
Ethyl benzene	1000 lbs	None	34964 lbs
Gasoline	100 lbs	None	107 lbs
Heptane	100 lbs	None	3644 lbs
Hexane	5000 lbs	None	129149 lbs
Methyl tert-butyl ether (MTBE)	1000 lbs	None	7513 lbs
Methylcyclohexane	100 lbs	None	4278 lbs
Naphthalene	100 lbs	None	4000 lbs
Pentane, 2,2,4-trimethyl- (Isooctane)	1000 lbs	None	6270 lbs
Toluene (methylbenzene)	1000 lbs	None	5480 lbs
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	100 lbs	None	649 lbs

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: DSL (Canada), EINECS (European Union), KECI (Korea), TSCA (United States).

WHMIS CLASSIFICATION:
Class B, Division 2: Flammable Liquids
Class D, Division 2, Subdivision A: Very Toxic Material - Carcinogenicity
Class D, Division 2, Subdivision B: Toxic Material - Skin or Eye Irritation

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 1 Flammability: 3 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

Additional Product Number(s): CPS201023, CPS201054, CPS201055, CPS201075, CPS201090, CPS201105, CPS201106, CPS201120, CPS201121, CPS201122, CPS201126, CPS201128, CPS201131, CPS201136, CPS201141, CPS201142, CPS201148, CPS201153, CPS201158, CPS201161, CPS201162, CPS201168, CPS201181, CPS201185, CPS201186, CPS201188, CPS201216, CPS201217, CPS201218, CPS201236, CPS201237, CPS201238, CPS201266, CPS201267, CPS201268, CPS201277, CPS201278, CPS201279, CPS201286, CPS201287, CPS201289, CPS201296, CPS201297, CPS201298, CPS201849, CPS201850, CPS201855, CPS201856, CPS201857, CPS204000, CPS204001, CPS204002, CPS204003, CPS204010, CPS204011, CPS204022, CPS204023, CPS204046, CPS204047, CPS204070, CPS204071, CPS204088, CPS204089, CPS204104, CPS204105, CPS204116, CPS204117, CPS204140, CPS204141, CPS204164, CPS204165, CPS204188, CPS204189, CPS204200, CPS204201, CPS204212, CPS204213, CPS204224, CPS204225, CPS204248, CPS204249, CPS204272, CPS204273, CPS204290, CPS204291, CPS204322, CPS204323, CPS204324, CPS204350, CPS204352, CPS204354, CPS204356, CPS204358, CPS204359, CPS204364, CPS204365, CPS204370, CPS204371, CPS204376, CPS204377, CPS204382, CPS204383, CPS204388, CPS204389, CPS204394, CPS204395, CPS204400, CPS204401, CPS204406, CPS204407, CPS204412, CPS204413, CPS204418, CPS204419, CPS204424, CPS204425, CPS204430,

CPS204431, CPS204436, CPS204437, CPS204442, CPS204446, CPS204450, CPS204454, CPS204458, CPS204462, CPS204466, CPS204467, CPS204484, CPS204485, CPS204502, CPS204503, CPS204520, CPS204521, CPS204538, CPS204539, CPS204556, CPS204557, CPS204574, CPS204575, CPS204592, CPS204593, CPS204610, CPS204611, CPS204628, CPS204629, CPS204646, CPS204647, CPS204664, CPS204665, CPS204682, CPS204690, CPS204691, CPS204696, CPS204697, CPS204702, CPS204703, CPS204708, CPS204709, CPS204721, CPS204722, CPS204727, CPS204728, CPS241765

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 15.

Revision Date: 04/29/2005

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - ChevronTexaco	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the ChevronTexaco Energy Research & Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

ConocoPhillips

MATERIAL SAFETY DATA SHEET

No. 1 Diesel Fuel

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	No. 1 Diesel Fuel
Synonyms:	Diesel Fuel No. 1 No. 1 High Sulfur Diesel - Dyed No. 1 High Sulfur Distillate No. 1 Low Sulfur Diesel - Dyed No. 1 Low Sulfur Distillate
Chemical Family:	Petroleum Hydrocarbon
Responsible Party:	ConocoPhillips 600 N. Dairy Ashford Houston, Texas 77079-1175
MSDS Information:	800-762-0942 MSDS@conocophillips.com
Customer Service:	800-762-0942
Technical Information:	800-527-5476

Emergency Overview

24 Hour Emergency Telephone Numbers:
Spill, Leak, Fire or Accident Call CHEMTREC:
North America: (800) 424-9300
Others: (703) 527-3887 (collect)

California Poison Control System: (800) 356-3219

Health Hazards/Precautionary Measures: Causes skin irritation. Aspiration hazard if swallowed. Can enter lungs and cause damage. Use with ventilation adequate to keep exposure below recommended limits, if any. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Wash thoroughly after handling.

Physical Hazards/Precautionary Measures: Flammable liquid and vapor. Keep away from heat, sparks, flames, static electricity or other sources of ignition.

Appearance:	Clear, light yellow, or light green , (may be dyed red)
Physical Form:	Liquid
Odor:	Kerosene

NFPA 704 Hazard Class:

Health:	2 (Moderate)
Flammability:	2 (Moderate)
Instability:	0 (Least)

2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS					
Component / CAS No:	**Percent (%)**	**ACGIH:**	**OSHA:**	**NIOSH:**	**Other:**
Hydrodesulfurized Kerosene ..C9-16 64742-81-0	0-100	200 mg/m^3 TWA-SKIN	NE	NE	---
Hydrotreated Distillate, Light ..C9-16 64742-47-8	0-100	200 mg/m^3 TWA - SKIN (as total hydrocarbon vapor)	NE	NE	based on Kerosene 8008-20-6
Kerosene ..C9-16 8008-20-6	0-100	200 mg/m^3 TWA - SKIN (as total hydrocarbon vapor)	NE	NE	---
Naphthalene 91-20-3	0-3	10 ppm TWA 52 mg/m^3 TWA 15 ppm STEL 79 mg/m^3 STEL	10 ppm TWA 50 mg/m^3 TWA	250 ppm IDLH	---

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

1%=10,000 PPM.
NE=Not Established

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Skin irritant. Contact may cause redness, itching, burning, and skin damage. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin, leading to dermatitis (inflammation). No harmful effects from skin absorption are expected.

Inhalation (Breathing): Expected to have a low degree of toxicity by inhalation.

Ingestion (Swallowing): No harmful effects expected from ingestion. ASPIRATION HAZARD - This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage.

Signs and Symptoms: Effects of overexposure may include irritation of the respiratory tract, irritation of the digestive tract, nausea, vomiting, pneumonitis (inflammation of the lungs), transient excitation followed by signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue).

Cancer: There is inadequate information to evaluate the cancer hazard of this material. See Section 11 for information on the individual components, if any.

Target Organs: Inadequate data available for this material.

Developmental: Inadequate evidence available for this material. See Section 11 for developmental toxicity information of individual components, if any.

Other Comments: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as Solvent or Painters' Syndrome). Intentional misuse by deliberately concentrating and inhaling this material may be harmful or fatal.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders, respiratory (asthma-like) disorders.

4. FIRST AID MEASURES

Eye: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

Skin: Wipe material from skin, remove contaminated shoes and clothing and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water and, if necessary, a waterless skin cleanser. If irritation or redness develops, seek medical attention.

Inhalation (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion (Swallowing): Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

5. FIRE-FIGHTING MEASURES

Flammable Properties:

Flash Point:	100-150°F / 38-66°C
Test Method:	Tag Closed Cup (TCC), ASTM D56
OSHA Flammability Class:	Combustible liquid
LEL%:	0.7
UEL%:	7.0
Autoignition Temperature:	410°F/210°C

Unusual Fire & Explosion Hazards: This material is flammable and can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, or foam is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

Flammable. Keep all sources of ignition and hot metal surfaces away from spill/release. The use of explosion-proof electrical equipment is recommended.

Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Use foam on spills to minimize vapors (see Section 5). Spilled material may be absorbed into an appropriate absorbent material.

Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

7. HANDLING AND STORAGE

Handling: Open container slowly to relieve any pressure. Bond and ground all equipment when transferring from one vessel to another. Can accumulate static charge by flow or agitation. Can be ignited by static discharge. The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-704 and/or API RP 2003 for specific bonding/grounding requirements.

Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames. Use good personal hygiene practices.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post area "No Smoking or Open Flame." Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional engineering controls may be required. Where explosive mixtures may be present, electrical systems safe for such locations must be used (see appropriate electrical codes).

Personal Protective Equipment (PPE):

Respiratory: A NIOSH certified air purifying respirator with an organic vapor cartridge may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a NIOSH approved self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode if there is potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin: The use of gloves impervious to the specific material handled is advised to prevent skin contact, possible irritation, and skin damage. Examples of approved materials are nitrile or Viton® (see glove manufacturer literature for information on permeability). Depending on conditions of use, apron and/or arm covers may be necessary.

Eye/Face: Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment: A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

Suggestions for the use of specific protective materials are based on readily available published data. Users should check with specific manufacturers to confirm the performance of their products.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Appearance:	Clear, light yellow, or light green (may be dyed red)
Physical Form:	Liquid
Odor:	Kerosene
Odor Threshold:	No data
pH:	Not applicable
Vapor Pressure (mm Hg):	0.40
Vapor Density (air=1):	> 4.5
Boiling Point:	300-572°F / 149-300°C
Melting/Freezing Point:	< -40°F / -40°C
Solubility in Water:	<0.1%
Partition Coefficient (n-octanol/water) (Kow):	No data
Specific Gravity:	0.775-0.840
Bulk Density:	6.73 lbs/gal
Viscosity cSt @ 40°C:	1.0-2.4
VOC Content(%):	0.16 lb/1000 gal
Percent Volatile:	98-100%@ 545°F (285°C)
Evaporation Rate (nBuAc=1):	<1
Flash Point:	100-150°F / 38-66°C
Test Method:	Tag Closed Cup (TCC), ASTM D56
LEL%:	0.7
UEL%:	7.0
Autoignition Temperature:	410°F/210°C

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. Flammable liquid and vapor. Vapor can cause flash fire.

Conditions to Avoid: Avoid all possible sources of ignition (see Sections 5 and 7).

Materials to Avoid (Incompatible Materials): Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc.

Hazardous Decomposition Products: Combustion can yield carbon, nitrogen and sulfur oxides. The use of hydrocarbon fuel in an area without adequate ventilation may result in hazardous levels of combustion products (e.g., oxides of carbon, sulfur and nitrogen, benzene and other hydrocarbons) and/or dangerously low oxygen levels. See Section 11 for additional information on hazards of engine exhaust.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Chronic Data:

Hydrodesulfurized Kerosene ..C9-16 - 64742-81-0

Carcinogenicity: Petroleum middle distillates have been shown to cause skin tumors in mice following repeated and prolonged skin contact. Follow-up studies have shown that these tumors are produced through a non-genotoxic mechanism associated with frequent cell damage and repair, and that they are not likely to cause tumors in the absence of prolonged skin irritation. Animal studies have also shown that washing the skin with soap and water can reduce the tumor response. Middle distillates with low polynuclear aromatic hydrocarbon content have not been identified as a carcinogen by NTP, IARC or OSHA.

Developmental: Hydrodesulfurized kerosene applied to the skin of female rats at 494, 330, or 165 mg/kg daily for 7 consecutive weeks (premating, mating, and gestation), or for 8 consecutive weeks in males did not result in systemic, reproductive, or developmental toxicity.

Naphthalene - 91-20-3

Carcinogenicity: Naphthalene has been evaluated in two year inhalation studies in both rats and mice. The National Toxicology Program (NTP) concluded that there is clear evidence of carcinogenicity in male and female rats based on increased incidences of respiratory epithelial adenomas and olfactory epithelial neuroblastomas of the nose. NTP found some evidence of carcinogenicity in female mice (alveolar adenomas) and no evidence of carcinogenicity in male mice. Naphthalene has been identified as a carcinogen by IARC and NTP.

Acute Data:

Hydrodesulfurized Kerosene ..C9-16 - CAS: 64742-81-0
Dermal LD50 = >=2 g/kg (Rabbit)
LC50 = >5 mg/L (4-hr., Rat)
Oral LD50 = >5 g/kg (Rat)
based on Kerosene

Naphthalene - CAS: 91-20-3
Dermal LD50 = >2.5 g/kg (rat)
LC50 = >340 mg/m^3/1H (rat)
Oral LD50 = 490 mg/kg; 2.6 g/kg (rat)

12. ECOLOGICAL INFORMATION

When No 1 distillates escape into the environment due to leaks or spills, most of their constituent hydrocarbons will evaporate and be photodegraded by reaction with hydroxyl radicals in the atmosphere. The half-lives in air for many of the individual hydrocarbons is less than one day. Less volatile hydrocarbons can persist in the aqueous environment for longer periods. They remain floating on the surface of the water; those that reach soil or sediment biodegrade relatively slowly. Soil contaminated with jet fuel can develop adapted microbial species able to use the fuel as a carbon source; soil aeration and nutrient supplementation can enhance this biodegradation.

Reported LC50/EC50 values for water-soluble fractions of kerosenes and jet fuels are usually in the range of 10 to 100 mg/liter. Adverse effects on the gills, pseudobranch, kidney and nasal mucosa have been reported in fish involved in spills of jet fuel. Juvenile clams may be particularly sensitive to marine sediments contaminated as a result of spilled jet fuel. Direct toxicity and fouling of sea birds from jet fuel can occur if birds dive through floating layers of spilled fuel.

Phytotoxic effects of jet fuel have been reported following exposure of plants to sprays or vapors. Lack of seed germination and inhibition of seedling growth may also occur. There is evidence for moderate bioaccumulation of the water-soluble hydrocarbons present in jet fuels.

13. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. However, it should be fully characterized for ignitability (D001) and benzene (D018) prior to disposal (40 CFR 261). Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.

Container contents should be completely used and containers should be emptied prior to discard. Container rinsate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

14. TRANSPORTATION INFORMATION

DOT

Proper Shipping Name: Diesel fuel
Hazard Class/Division: Combustible liquid
UN Code: NA1993

Packing group: III
Bulk Package/Placard Marking: Combustible/1993
Non-Bulk Package Marking: Not Regulated (173.150 (f) (2))
Non-Bulk Package Labeling: Not Regulated (173.150 (f) (2))
Packaging - References (Exceptions, Non-Bulk, Bulk): 49 CFR 173.150(f), 173.203, 173.241
Hazardous Substance: None
Emergency Response Guide: 128

IMDG

Shipping Description: UN1202, Diesel fuel, 3, III (38°C)
Non-Bulk Package Marking: Diesel fuel, UN1202
Labels: Flammable
Placards/Marking (Bulk): Flammable/1202
Packaging - Non-Bulk: P001, LP01
EMS: F-E, S-E

ICAO/IATA

UN/ID #: UN1202
Proper Shipping Name: Diesel fuel
Hazard Class/Division: 3
Packing Group: III
Subsidiary risk: None
Non-Bulk Package Marking: Diesel fuel, UN1202
Labels: Flammable

	LTD. QTY.	Passenger Aircraft	Cargo Aircraft Only
Packaging Instruction #:	Y309	309	310
Max. Net Qty. Per Package:	10 L	60 L	220 L

15. REGULATORY INFORMATION

U.S. Regulations:

EPA SARA 311/312 (Title III Hazard Categories)

Acute Health: Yes
Chronic Health: No
Fire Hazard: Yes
Pressure Hazard: No
Reactive Hazard: No

SARA - Section 313 and 40 CFR 372:
This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:
Naphthalene.....91-20-3.....0-3%

EPA (CERCLA) Reportable Quantity (in pounds):
EPA's Petroleum Exclusion applies to this material - (CERCLA 101(14)).

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):
This material contains the following chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372:
-- None Known --

California Proposition 65:
Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):
Benzene -- Cancer, Developmental and Reproductive Toxicant
Naphthalene -- Cancer
Toluene -- Developmental Toxicant

Carcinogen Identification:
This material has not been identified as a carcinogen by NTP, IARC, or OSHA. See Section 11 for carcinogenicity information of individual components, if any.

TSCA:
All components are listed on the TSCA inventory.

International Regulations:

Canadian Regulations:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Domestic Substances List: Listed
WHMIS Hazard Class:
B2 - Flammable Liquids
D2B - Materials Causing Other Toxic Effects - Toxic Material

16. OTHER INFORMATION

Issue Date:	09-Nov-2005
Previous Issue Date:	21-Sep-2005
Product Code:	Multiple
Previous Product Code:	Multiple
Revised Sections or Basis for Revision:	NFPA ratings (Section 1)
MSDS Code:	001929

Disclaimer of Expressed and implied Warranties:
The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

I. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the preparation

Product Name:	"Fire Extinguisher ABC Multipurpose Dry Chemical" "Fire Extinguisher Powder ABC Multipurpose"
Chemical Name:	N/A – This is a mixture/preparation.
CAS No.:	N/A – This is a mixture/preparation.
Chemical Formula:	N/A – This is a mixture/preparation.
EINECS Number:	N/A – This is a mixture/preparation.

1.2. Use of the preparation

The intended or recommended use of this preparation is as a FIRE EXTINGUISHING AGENT.

1.3. Company identification

Manufacturer/Supplier:	FLAG FIRE
Address:	One Stanton Street, Marinette, WI 54143-2542
Prepared by:	Safety and Health Department
Phone:	715-732-3465
Internet/Home Page:	http://www.flagfire.com
Date of Issue:	May, 2004

1.4. Emergency telephone

CHEMTREC 800-424-9300 or 703-527-3887.

2. COMPOSITION/INFORMATION ON INGREDIENTS

2.1.

Ingredient Name:	Monoammonium Phosphate.
Chemical Formula:	$NH_4H_2PO_4$.
CAS No.:	7722-76-1.
EINECS Number:	231-764-5.
Concentration, Wt %:	50-80 %.
Hazard Identification:	See Heading 3.

Ingredient Name:	Ammonium sulfate
Chemical Formula:	$(NH_4)_2SO_4$.
CAS No.:	7783-20-2.
EINECS Number:	231-984-1.
Concentration, Wt %:	20-45 %.
Hazard Identification:	See Heading 3.

Ingredient Name:	Magnesium Aluminum Silicate (Attapulgite Clay or Fuller's Earth)
Chemical Formula:	$Mg_xAl_y(SiO4)_z$.
CAS No.:	8031-18-3.
EINECS Number:	(a).
Concentration, Wt %:	1-5 %.
Hazard Identification:	See Heading 3.

Ingredient Name:	Tricalcium Phosphate (Pentacalcium Hydroxide Tris(orthophosphate)).
Chemical Formula:	$Ca_5(OH)(PO_4)_3$.
CAS No.:	12167-74-7.
EINECS Number:	235-330-6.
Concentration, Wt %:	1-5 %.
Hazard Identification:	See Heading 3.

Ingredient Name:	Silica Gel.
Chemical Formula:	$-[OSi(O)]-(H_2O)_x$.
CAS No.:	112926-00-8.
EINECS Number:	(b).
Concentration, Wt %:	0-3 %.
Hazard Identification:	See Heading 3.

Ingredient Name:	Methyl Hydrogen Polysiloxane.
Chemical Formula:	Mixture/preparation.
CAS No.:	63148-57-2.
EINECS Number:	(b).
Concentration, Wt %:	0-1 %.
Hazard Identification:	See Heading 3.

Ingredient Name:	Yellow Pigment
Chemical Formula:	$C_{34}H_{30}Cl_2N_6O_4$.
CAS No.:	5468-75-7.
EINECS Number:	226-789-3
Concentration, Wt %:	<1 %.
Hazard Identification:	See Heading 3.

Fire Extinguishers contain compressed air to ensure a high velocity discharge of product.

(a) EINICS does not include most naturally occurring raw materials. See: 67/548/EEC, article 13; 79/831/EC; and 81/437/EC.

(b) EINICS does not include synthetic polymers (These are registered in EINICS under their building blocks, monomers.). See: 67/548/EEC, article 13; 79/831/EC; and 81/437/EC.

NOTE: Unless a component presents a severe hazard, it does not need to be considered in the MSDS if the concentration is less than 1%. [According to Directive 1999/45/EC.]

3. HAZARDS IDENTIFICATION

FOR HUMANS:

Product:

EU Classification:		Harmful.
R Phrases:	22	Harmful if swallowed.
	36/37/38	Irritating to eyes, respiratory system, and skin.
S Phrases:	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

Components:

Monoammonium Phosphate:

EU Classification:		Harmful.
R Phrases:	22	Harmful if swallowed.
	36/37/38	Irritating to eyes, respiratory system, and skin.
S Phrases:	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

Ammonium sulfate:

EU Classification:		Irritant.
R Phrases:	36/37/38	Irritating to eyes, respiratory system, and skin.
S Phrases:	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

Limit Values for Exposure:

Nuisance dust limit:

OSHA TWA:	15 mg/m^3
ACGIH TLV-TWA	10 mg/m^3

Neither this preparation nor the substances contained in it have been listed as carcinogenic by National Toxicology Program, I.A.R.C., or OSHA.

Silica Gel is a Synthetic Amorphous Silica which is considered a nuisance dust and no medical conditions are abnormally aggravated by this product.

AS PART OF GOOD INDUSTRIAL AND PERSONAL HYGIENE AND SAFETY PROCEDURE, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes, and clothing.

SIGNS AND SYMPTOMS:

Acute Exposure:

Eye Contact:	Mildly irritating for short periods of time.
Skin Contact:	May be mildly irritating.
Inhalation:	Treat as a mineral dust. Irritant to the respiratory tract. Transient cough, and shortness of breath may occur.
Ingestion:	Not an expected route of entry.

Chronic Overexposure:

Inhalation:	Chronic fibrosis of the lung, pneumoconiosis.

Medical Conditions Generally Aggravated by Exposure: None known.

FOR ENVIRONMENT:

No data available.

4. FIRST AID MEASURES

Eye Contact:	Wash with water for a minimum of 15 minutes. If irritation persists seek medical attention.
Skin Contact:	Wash affected area with soap and water. If irritation persists seek medical attention.
Inhalation:	Remove from exposure. If irritation persists seek medical attention.
Ingestion:	If patient is conscious, give large amounts of water and induce vomiting. Seek medical help.

5. FIRE-FIGHTING MEASURES

This preparation is an extinguishing media.
There are NO extinguishing media which must not be used for safety reasons.
NO special protective equipment is needed for fire-fighters.

6. ACCIDENTAL RELEASE MEASURES

For personal protection: Prevent skin and eye contact, see Heading 8.
Clean up: Sweep up and recover for use or place in closed container for disposal, see Heading 13.
NO harm to the environment is expected from an accidental release of this preparation.

7. HANDLING AND STORAGE

7.1. Handling

Care should be taken in handling all chemical substances and preparations.
See incompatibility information in Heading 10.

7.2. Storage

NO special conditions are needed for safe storage.
See incompatibility information in Heading 10.
Store in original container or Flag Fire fire extinguisher. Keep tightly closed until used.
There is minimal danger to the environment from a storage release.

7.3. Specific use

The intended or recommended use of this preparation is as a FIRE EXTINGUISHING AGENT.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure limit values

Nuisance dust limit:

OSHA TWA:	15 mg/m^3
ACGIH TLV-TWA:	10 mg/m^3

8.2. Exposure controls

8.2.1. Occupational exposure controls

8.2.1.1. Respiratory protection

Dust mask where dustiness is prevalent, or TLV is exceeded. Use mechanical filter respirator if exposure is prolonged.

8.2.1.2. Hand protection

None normally needed. Use chemical resistant gloves when handling the preparation.

8.2.1.3. Eye protection

Use safety glasses with side shields or safety goggles as mechanical barrier for prolonged exposure.

8.2.1.4. Skin protection

No special equipment is needed.

8.2.2. Environmental exposure controls

No special controls are needed.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

Appearance:	Yellow Crystal.
Odor:	None.

9.2. Important health, safety, and environmental information

pH:	4.5 as 1% solution in water.
Boiling point/boiling range:	Not applicable.
Flash point:	None.
Flammability (solid/gas):	Not flammable.
Explosive properties:	Not explosive.
Oxidizing properties:	Not an oxidizer.
Vapor Pressure:	Not applicable.
Relative Density:	Not applicable.
Solubility:	
– Water solubility:	38 g/ 100 mL.
Tricalcium Phosphate:	<1 g/L at 25 °C.
– Fat solubility:	Not soluble.
Partition coefficient, n-octanol/water:	Not determined.
Viscosity:	Not applicable.
Vapor density (Air = 1):	Not applicable.
Evaporation rate:	Not applicable.

9.3. Other information

Auto-ignition temperature:	Does not ignite.

10. STABILITY AND REACTIVITY

10.1. Conditions to avoid

There are NO known conditions such as temperature, pressure, light, shock, etc., which may cause a dangerous reaction.

10.2. Materials to avoid

Strong alkalis, magnesium.

10.3. Hazardous decomposition products

Normally stable.
Hazardous polymerization will NOT occur.
Ammonia and/or phosphorous oxides can be evolved at very high temperatures.

11. TOXICOLOGICAL INFORMATION

This product has not been tested for toxicological effects. Product is treated as a nuisance dust.

Components:

Monoammonium Phosphate:
Material is irritating.
Harmful if swallowed.

Ammonium sulfate:

Toxicity Data:	Oral (rat) LD 50	2840 mg/kg.
Target Organs:	Lungs and gastrointestinal.	

Tricalcium Phosphate:

Eye irritation:	Not irritating.
Skin irritation:	Not irritating.

Silica Gel:

Toxicity Data:	Oral (rat) LD 50	>4500 mg/kg.
Toxicity Data:	Inhalation (rat) LC 50	>2 mg/hr.

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity
Not determined.

12.2. Mobility
Not determined.

12.3. Persistence and degradability
Not relevant.

12.4. Bioaccumulative potential
Not determined.

12.5. Other adverse effects

Ozone depletion potential:	None.
Photochemical ozone creation potential:	None
Global warming potential:	None

13. DISPOSAL CONSIDERATIONS

No harm to the environment is expected from this preparation.

Dispose of in compliance with national, regional, and local provisions that may be in force.

14. TRANSPORT INFORMATION

Hazard Class or Division: Fire Extinguisher, Class 2.2.
UN No. 1044.

For additional transport information, contact Flag Fire.

No harm to the environment is expected from this preparation.

15. REGULATORY INFORMATION

Product:

EU Classification:		Harmful.
R Phrases:	22	Harmful if swallowed.
	36/37/38	Irritating to eyes, respiratory system, and skin.
S Phrases:	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36	Wear suitable protective clothing.

Limit Values for Exposure:
Nuisance dust limit:

OSHA TWA:	15 mg/m^3
ACGIH TLV-TWA:	10 mg/m^3.

EINECS Status: All components are included in EINECS inventories or are exempt from listing.

EPA TSCA Status: All components are included in TSCA inventories or are exempt from listing.

Canadian DSL (Domestic Substances List): All components are included in the DSL or are exempt from listing.

Environmental restrictions:	None are known.
Restrictions on Marketing and Use:	None are known.

Refer to any other national measures that may be relevant.

16. OTHER INFORMATION

(HMIS) HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS:

HEALTH:	1	4. Severe Hazard
FLAMMABILITY:	0	3. Serious Hazard
REACTIVITY:	0	2. Moderate Hazard
		1. Slight Hazard
		0. Minimal Hazard

(WHMIS) CANADIAN WORKPLACE HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS:

This product is rated **D2B Harmful if swallowed. Irritating to eyes and skin.**

A Fire Extinguisher charged with Air is rated **A Compressed Gas.**

Format is from directive 2001/58/EC.

EINECS data is from http://exb.jrc.it/existing-chemicals/

Toxicological information added from the EINICS ESIS (Existing Substances Information System). A rating under WHMIS has been added, following the Canadian guidelines.

17. DISCLAIMER

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT, BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. FLAG FIRE SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT.

N/A = Not Applicable NDA = No Data Available

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
ROC.

Section 1 - Chemical Product / Company Information

Product Name:	FLOURESCENT ORANGE SPRAY PAINT	Revision Date:	10/09/2003
Identification Number:	70303F		
Product Use/Class:	Flourescent Orange/Aerosol		
Supplier:	ROC Sales Inc. 8105 95th St. Pleasant Prairie, WI 53158 USA	Manufacturer:	ROC Sales Inc. 8105 95th St. Pleasant Prairie, WI 53158 USA
Preparer:	Department, Regulatory		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquified Petroleum Gas	68476-86-8	45.0	1000 PPM	N.E.	1000 PPM	N.E.
Hexane	110-54-3	35.0	50 PPM	N.E.	500 PPM	N.E.
Toluene	108-88-3	20.0	50 PPM	N.E.	200 PPM	300 PPM
Naphtha (petroleum), heavy alkylate	64741-65-7	15.0	300 PPM	N.E.	N.E.	N.E.
Aromatic Petroleum Distillates	64742-94-5	5.0	10 PPM	N.E.	10 PPM	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Vapors may cause flash fire or explosion. Extremely flammable liquid and vapor. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Excessive exposure to n-Hexane can result in damage to peripheral nerves. The initial symptoms are numbness of the fingers and toes. Motor weakness can also occur in the digits, but may involve muscles of the arms, thighs and forearms. The onset of these symptoms may be delayed for several months to a year after the beginning exposure. The neurtoxic properties of n-Hexane are potentiated by

exposure to methyl ethyl ketone and methyl isobutyl ketone. May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities.

Primary Route(s) Of Entry: Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (T)

LOWER EXPLOSIVE LIMIT: 1.0 %
UPPER EXPLOSIVE LIMIT : 9.5 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Keep containers tightly closed. Perforation of the pressurized container may cause bursting of the can. Vapors can travel to a source of ignition and flash back. Vapors may form explosive mixtures with air. Closed containers may explode when exposed to extreme heat. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Isolate from heat, electrical equipment, sparks and open flame.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 - Handling And Storage

Handling: Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	150 - 380 F	Vapor Density:	Heavier than Air
Odor:	SOLVENT	Odor Threshold:	ND
Appearance:	LIQUID	Evaporation Rate:	Faster than Ether
Solubility in H2O:	SLIGHT		
Freeze Point:	ND	Specific Gravity:	0.440
Vapor Pressure:	ND	PH:	ND
Physical State:	LIQUID		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition. Avoid temperatures above 120 ° F.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: 4900 mg/kg

Product LC50: 5320 ppm

Chemical Name	LD50	LC50
Liquified Petroleum Gas	N.D.	N.D.
Hexane	28710 MG/KG (ORAL, RAT)	TCLo:5000ppm/20H
Toluene	N.D.	N.D.
Naphtha (petroleum), heavy alkylate	N.D.	N.D.
Aromatic Petroleum Distillates	4900 mg/kg (ORAL, RAT)	N.D.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	AEROSOL	Packing Group:	---
DOT Technical Name:	---	Hazard Subclass:	1
DOT Hazard Class:	2	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Hexane	110-54-3
Toluene	108-88-3
Aromatic Petroleum Distillates	64742-94-5

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

None

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

None

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

Chemical Name	CAS Number
Naphthalene	91-20-3
Benzene	71-43-2

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

Chemical Name	CAS Number
Toluene	108-88-3
Benzene	71-43-2

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2 Flammability: 4 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, g/l: 395

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name:	NP-500 SUB-FLOOR ADHESIVE - Non-flammable Latex
Hazard Rating:	Health: 1 Fire: 0 Reactivity: 0 PPI: B
Company Identification:	OSI SEALANTS, INC. 7405 PRODUCTION DRIVE MENTOR OH 44060
Contact:	Safety Officer
Telephone/Fax:	(440) 255-8900 (440) 974-2395
Emergency Phone (24 hour)	CHEMTREC (800) 424-9300
Chemtrec (outside-USA)	(703) 527-3887
Preparer	T.F.Barr Sr. R.&D. Chemist
Product Class	ADHESIVE
Trade Name	MAGIC SEAL
Product Code	MNP500-29

SECTION II - INGREDIENT AND HAZARD INFORMATION

Ingredient Name	CAS Number	Percent	TSCA
ETHYLENE GLYCOL	107-21-1	< 2.0	Y

SECTION III - PHYSICAL AND CHEMICAL PROPERTIES

Form:	High Viscosity off-white mastic
Solubility (in water):	yes
pH Value, +/-.3:	7.5
Boiling Range:	212.°F (100.°C)
Vapor Pressure (mmHg):	15.@ 68.°F (20.°C)
Evaporation Rate:	0.6 times Slower than n-Butyl Acetate
Vapor Density:	Heavier than air
% Volatile, Weight	30.%
% Volatile, Volume	45.%

Specific Gravity:	1.375
VOC (less H2O or exempt)	< 2 gr/L

SECTION IV - FIRE FIGHTING MEASURES (Flash,UEL,LEL for solvent only)

```
Flammability Class           N/A
Flash Range:                 none
Explosive Range (LEL/UEL):   Not Applicable

 EXTINGUISHING  MEDIA:
  Dry chemical -- Carbon Dioxide -- Foam -- Water Fog
 Will not burn in wet state.
 SPECIAL FIRE-FIGHTING PROCEDURES:
 Water may be used to cool and protect exposed containers.
Caution should be taken because uncured material is watersoluble
 UNUSUAL FIRE AND EXPLOSION HAZARDS:
 Any closed container may burst when exposed to extreme
heat or fire.
```

SECTION V - HEALTH HAZARD DATA

```
 ROUTES OF ENTRY:

 ENTRY THROUGH...
   Inhalation?  Yes   |   Skin?  Yes   |   Ingestion?  Yes
TARGET ORGANS...
Normal exposure -- Ethylene Glycol: Eyes
Overexposure    -- Ethylene Glycol: Ingestion or exposure to
                     heated or sprayed product: Central Nervous
                     System, heart, kidney, respiratory tract.
CARCINOGENICITY...
   NTP?  N/E   |   IARC Monographs?  N/E   |  OHSA?  NO
 EFFECTS OF OVEREXPOSURE
 Inhalation:       May irritate respiratory tract.
Skin/Eye Contact: May cause irritation.
Ingestion:        Swallowing large amounts may cause nausea,
                  vomiting or diarrhea.
 FIRST  AID   MEASURES
 Inhalation:   If affected by inhalation, remove to fresh air.
```

```
Eye Contact:  Flush with water for at least 15 minutes, and
              get prompt medical attention.
Skin Contact: Wash skin thoroughly with soap and water.
Ingestion:    Drink copious amounts of water.  Induce vomiting
              and call a physician.
 ---------------------------------------------------------------
  /A= Not applicable  N/AV=Not available  N/E, N/est=Not established
```

SECTION VI - STABILITY AND REACTIVITY

```
Stability:                  This product is stable
```

CONDITIONS TO AVOID:
None
HAZARDOUS DECOMPOSITION PRODUCTS:
May produce oxides of carbon and oxides of nitrogen when burned.

SECTION VII - ACCIDENTAL RELEASE AND DISPOSAL MEASURES:

STEPS TO BE TAKEN IN CASE OF SPILL:
Wear appropriate protective clothing. Add dry absorbent and shovel or sweep up. Place in an appropriate container and seal.
WASTE DISPOSAL METHOD:
Dispose of in accordance with Federal, State, and Local regulations.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

	ACGIH TLV	ACGIH TLV-C	ACGIH STEL	OSHA STEL	OSHA PEL
ETHYLENE GLYCOL	50.00 PPM	N/est	N/est	N/est	50.00 PPM

RESPIRATORY PROTECTION:
NIOSH approved respirators recommended if vapors and mists are generated.
VENTILATION:
Local exhaust is recommended for safe practice.

MATERIAL SAFETY DATA SHEET

MSDS Name: NP-500 SUB-FLOOR ADHESIVE - Non-flammable Latex
MSDS Number: MNP500-29
Version Number
MSDS Date: OCT-21-1998
Page Number: 4

PROTECTIVE CLOTHING:
Rubber gloves and impervious clothing should be worn to prevent repeated skin contact.
EYE PROTECTION:
Splashproof goggles or safety glasses should be worn.

HANDLING AND STORAGE PRECAUTIONS:
Keep from freezing. Keep away from heat.
Keep out of the reach of children
Keep containers closed when not in use
Avoid prolonged or repeated contact with skin.

SECTION IX - TRANSPORT INFORMATION:

DOT CLASSIFICATIONS FOR CARTRIDGES 10 or 29 oz.

DESCRIPTION: Non-hazardous
DOT CLASSIFICATIONS for 1 GALLON or larger CONTAINERS

SECTION X - REGULATORY INFORMATION:

SARA TITLE III SECTION 313:
This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

Ingredient Name	CAS Number	Percent
ETHYLENE GLYCOL	107-21-1	< 2.0

Ethylene Glycol fits the EPA Hazard Category definition of Immediate (Acute) and Delayed (Chronic) Health Hazards under SARA Sections 311, 312.
All chemical substances are TSCA listed.
California PROP.65 Chemicals: none known

MATERIAL SAFETY DATA SHEET

MSDS Name: NP-500 SUB-FLOOR ADHESIVE - Non-flammable Latex
MSDS Number: MNP500-29
Version Number
MSDS Date: OCT-21-1998
Page Number: 5

DISCLAIMER:
The information contained herein is based on data available as of the date of preparation of this MSDS and which we believe to be reliable. However, no warranty is expressed or implied regarding the accuracy of the data. We shall not be responsible for the use of this information, or of any product, method, or apparatus mentioned, and the user must make his own investigation to determine the suitability of the information or products for his particular purpose, for the protection of the environment, and the health and safety of the users of this material.

Last Page

MATERIAL SAFETY DATA SHEET

POLYURETHANE ADHESIVE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURED BY:
GE SEALANTS & ADHESIVES
260 HUDSON RIVER ROAD
WATERFORD, NY 12188

EMERGENCY PHONE (24 HRS)
518-237-3330

SUPPLIED BY:
GE SEALANTS & ADHESIVES
260 HUDSON RIVER ROAD
WATERFORD, NY 12188

EMERGENCY PHONE (24 HRS)
518-237-3330

REVISED: 09/04/01
PREPARER: JL MCGUFFEY
CHEMICAL FAMILY/USE: POLYURETHANE ADHESIVES
FORMULA: MIXTURE

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2. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION/ CAS REG NO.	APPROX. WGT. %	ACGIH TLV TWA	ACGIH TLV STEL	OSHA PEL TWA	OSHA PEL STEL	UNITS
1. HAZARDOUS						
NJTSRN 02944800-5134P VENDOR	<99	NE	NE	NE	NE	
NJTSRN 02944800-5232P VENDOR	<99					
DIISODECYL PHTHALATE (DIDP) 68515-49-1	<99	NE	NE	NE	NE	NE
XYLENE 1330-20-7	<99	100	150	100	150	PPM
ETHYLBENZENE 100-41-4	<15	100	125	100	125	PPM
ISOCYANIC ACID, POLYMETHYLENEPOLY-PHENYLENE ESTER (MDI) 9016-87-9	<99	NF	NE	NF	NE	NA
2. NON-HAZARDOUS						
CALCIUM CARBONATE 1317-65-3	<99	10	NA	15	NE	MG/M3

See Section 15 for description of any WHMIS Trade Secret(s).

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3. HAZARDS IDENTIFICATION

*** CONTINUED ON NEXT PAGE ***

EMERGENCY OVERVIEW:
Irritating to skin, eyes, and respiratory tract.
Harmful if swallowed, inhaled, or absorbed through skin.
May cause adverse liver, kidney, and CNS effects.
WARNING! POSSIBLE CANCER HAZARD
May cause allergic skin reaction.
May cause adverse reproductive effects.
May cause adverse cardiac effects.
Combustible solid.
Aromatic odor

POTENTIAL HEALTH EFFECTS:

INGESTION:
Irritation of the mouth, throat, and stomach.
May cause pulmonary edema.
May be harmful if swallowed.
May cause liver and kidney damage.
May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation and central nervous system depression.
May effect the blood and blood system.
May affect the heart and cardiovascular system.
May cause pneumonitis as a result of aspiration.

SKIN CONTACT:
May cause an allergic skin reaction.
May be absorbed through skin and produce effects as listed under "Ingestion".
Can cause irritation and reddening of the skin.

INHALATION:
Excessive inhalation causes headache, dizziness, nausea and incoordination.
Avoid breathing any vapors or mist generated during the processing of this material.
Can irritate mucous membranes and respiratory tract with coughing and shortness of breath.

EYE CONTACT:
Contact can cause severe irritation and conjunctivitis (redness and swelling).

MEDICAL CONDITIONS AGGRAVATED:
Central nervous system disorders.
Pre-existing skin or respiratory diseases.
Cardiovascular disorders.
Pre-existing liver or kidney disorders.

SUBCHRONIC (TARGET ORGAN) EFFECTS:
Central nervous system
Kidneys
Liver
Bone marrow and hematopoietic (blood forming) system
Skin

*** CONTINUED ON NEXT PAGE ***

Cardiovascular effects.

CHRONIC EFFECTS/CARCINOGENICITY:
This product or one of its ingredients present 0.1% or more is listed as a carcinogen or potential carcinogen by NTP, IARC or OSHA X Yes ___ No

PRODUCTS/INGREDIENTS
In a National Toxicology Program (NTP) 2-year study of Ethylbenzene in rats and mice, there was clear evidence of carcinogenic activity in male rats, based on increased incidence of renal tubule neoplasms and testicular adenoma. There was some evidence of carcinogenic activity in female rats, based on increases of renal tubule adenoma. In mice, there was also some evidence of carcinogenic activity based on increased incidence of alveolar/bronchiolar neoplasms and hepatocellular neoplasms for males and females, respectively.

PRINCIPLE ROUTES OF EXPOSURE:
Inhalation.
Absorption through skin.
Ingestion.

OTHER:
Stimulants such as epinephrine may induce ventricular fibrillation.
The metabolism of other solvents may be inhibited resulting in a potentiation of toxic effects of those chemicals. Uptake is directly proportional to the amount of body fat. Blood levels may be cumulative when exposure is extended.
Alcohol may enhance toxic effects.
Interactions with drugs may occur. May impair performance and alertness.

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4. FIRST AID MEASURES

INGESTION:
DO NOT INDUCE VOMITING.
To avoid aspiration should vomiting occur, have the person lean forward.
Get immediate medical attention.
If victim is conscious, give 2-4 glasses of water.
Never induce vomiting unless specifically directed by qualified medical personnel.
Never give anything by mouth to an unconscious person.

SKIN:
Remove contaminated clothing and launder before reuse.
Wash with soap and water.
Get medical attention if irritation or symptoms from Section 3 develop.
Flush skin with large amounts of water for at least 15 minutes until no evidence of chemical remains.

*** CONTINUED ON NEXT PAGE ***

INHALATION:
Remove victim from source of exposure.
Get medical attention if irritation or symptoms from Section 3 develop.
If not breathing, begin artificial respiration using a barrier device. Because of chemical properties, do not use mouth-to-mouth contact.

EYES:
In case of contact, immediately flush eyes with plenty of water

for at least 15 minutes and get medical attention if irritation persists.

NOTE TO PHYSICIAN:
Treatment is symptomatic and supportive.

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5. FIRE FIGHTING MEASURES

FLASH POINT:		NA	(C) NA	(F)
METHOD	:	NA		
IGNITION TEMP	:	UNK	(C) UNK	(F)
FLAMMABLE LIMITS IN AIR - LOWER (%):		NA		
FLAMMABLE LIMITS IN AIR - UPPER (%):		NA		
SENSITIVITY TO MECHANICAL IMPACT (Y/N):		NO		

SENSITIVITY TO STATIC DISCHARGE:
Sensitivity to static discharge is expected; material has a flash point below 200 F.

EXTINGUISHING MEDIA:
Carbon dioxide
Dry chemical
Foam
Do not flush down public sewers or other drainage systems.

SPECIAL FIREFIGHTING PROCEDURES:
Combustible.
Cool exposed containers with water spray after extingushing fire.
This product or a component thereof can flow along surfaces to reach a distant ignition source and flash back.
Fire may produce poisonous or irritating gas, fumes, or vapors. See Section 10 for hazardous decomposition products.
Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.
Runoff to sewer may cause fire or explosion hazard.
Vapors may concentrate in confined areas.

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6. ACCIDENTAL RELEASE MEASURES

*** CONTINUED ON NEXT PAGE ***

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Wear proper protective equipment as specified in the protective equipment section.
Remove sources of ignition.
Warn other workers of spill.
Increase area ventilation.
Person not trained should evacuate area.
Leaking containers should be removed to an isolated, well-ventilated area and transfered to other suitable containers.
Avoid runoff to natural waters a component is known to be toxic to marine life.
Wipe, scrape, or soak up in an inert material and put in a

container intended for flammable materials for disposal.

---

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Keep container closed when not in use.
Avoid contact with skin and eyes.
Do not inhale vapors.
Avoid accidental ingestion of this material. Wash hands and face before eating, drinking, smoking, using toilet facilities, or applying cosmetics.
Keep from freezing.
Remove contaminated clothing and launder before reuse.
Keep away from children.
Store between 40 F and 120 F.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:
Showers.
Eyewash stations.
See "Ventilation" below.
RESPIRATORY PROTECTION:
If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29 CFR 1910.134).
PROTECTIVE GLOVES:
Neoprene.
EYE AND FACE PROTECTION:
Monogoggles.
Safety glasses with side shields.

*** CONTINUED ON NEXT PAGE ***

OTHER PROTECTIVE EQUIPMENT:
Wear eye protection and protective clothing.
VENTILATION:
Ventilation and other forms of engineering controls are preferred for controlling exposures. Respiratory protection may be needed for non-routine or emergency situations.

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9. PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT INFORMATION:

BOILING POINT	:	NA	(C) NA	(F)
VAPOR PRESSURE(20 C)(MM HG)	:	NA		
VAPOR DENSITY (AIR=1)	:	>1		
FREEZING POINT	:	UNK	(C) UNK	(F)
MELTING POINT	:	NA	(C) NA	(F)
PHYSICAL STATE	:	SOLID		
ODOR	:	AROMATIC		
COLOR	:	-		
ODOR THRESHOLD (PPM)	:	UNK		
% VOLATILE BY VOLUME	:	10		
EVAP. RATE(BUTYL ACETATE=1)	:	UNK		
SPECIFIC GRAVITY (WATER=1)	:	1.59		
DENSITY (KG/M3)	:	1590		
ACID/ALKALINITY (MEQ/G)	:	UNK		
PH	:	UNK		
VOC EXCL.H2O & EXEMPTS(G/L)	:	126		
SOLUBILITY IN WATER (20 C)	:	NA		

SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT): UNKNOWN

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10. STABILITY AND REACTIVITY

STABILITY: STABLE
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
HAZARDOUS THERMAL DECOMPOSITION/COMBUSTION PRODUCTS:
Carbon monoxide.
Carbon dioxide.
INCOMPATIBILITY (MATERIALS TO AVOID):
Contact with water.
Alcohols.
CONDITIONS TO AVOID:
Avoid any source of ignition.

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11. TOXICOLOGICAL INFORMATION

*** CONTINUED ON NEXT PAGE ***

PRODUCT INFORMATION:
ACUTE ORAL LD50 (MG/KG):
ACUTE DERMAL LD50 (MG/KG):
ACUTE INHALATION LC50 (MG/L):
OTHER:
AMES TEST:

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12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data at this time

CHEMICAL FATE INFORMATION: No data at this time

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13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:
Disposal should be made in accordance with federal, state and local regulations.

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14. TRANSPORT INFORMATION

DOT SHIPPING NAME: NONE
DOT HAZARD CLASS: NOT DOT REGULATED
DOT LABEL(S): NONE
UN/NA NUMBER: NONE
PLACARDS: NONE
IATA:
NOT REGULATED BY IATA
IMO IMDG-code: NOT REGULATED FOR OCEAN TRANSPORTATION
EMS No: NA
EUROPEAN CLASS:
RID (OCTI): NONE
ADR (ECE) : NONE
RAR (IATA): NONE

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15. REGULATORY INFORMATION

SARA SECTION 302:
None Found

*** CONTINUED ON NEXT PAGE ***

SARA (311,312) HAZARD CLASS:
ACUTE HEALTH HAZARD
CHRONIC HEALTH HAZARD
FIRE HAZARD
SARA (313) CHEMICALS:
THIS PRODUCT CONTAINS TOXIC CHEMICAL(S) LISTED BELOW WHICH IS(ARE) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.

XYLENE
1330-20-7
CPSC CLASSIFICATION: NA
WHMIS HAZARD CLASS:
D2A VERY TOXIC MATERIALS
WHMIS TRADE SECRET:
None
EXPORT:

SCHDLE B/HTSUS: 3214.10 Mastic Based on Rubber
ECCN: EAR99

HAZARD RATING SYSTEMS
HMIS FLAMMABILITY 2 , REACTIVITY 0 , HEALTH 2
NFPA HEALTH = 2, FLAMMABILITY = 2, REACTIVITY = 0

CALIFORNIA PROPOSITION 65:
THIS PRODUCT CONTAINS CALIFORNIA PROPOSITION 65 CHEMICALS
WHICH ARE LISTED BELOW:

BENZENE (71-43-2)

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16. OTHER INFORMATION

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

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C =	ceiling limit	NEGL =	negligible
EST=	estimated	NF =	none found
NA =	not applicable	UNKN =	unknown
NE =	none established	REC =	recommended
ND =	none determined	V =	recomm. By vendor
By-product =	reaction by-product, TSCA inventory status not required under	SKN =	skin
		TS =	trade secret
		R =	recommended

*** CONTINUED ON NEXT PAGE ***

40 CFR part 720.30(h-2)		MST =	mist
STEL =	short term exposure limit	NT =	not tested

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California Proposition 65:
WARNING! This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

*

DATE PRINTED: 01/07/03
*** END OF MSDS ***

— Section 1 —
Product Identification

Material Safety Data Sheet

The Sherwin-Williams Co.
101 Prospect Ave. N.W.
Cleveland, OH 44115

Emergency telephone number (216) 566-2917
Information telephone number (216) 566-2902
Date of preparation March 1, 1998

Latex Exterior Finishes - SUPER PAINT™ Latex House & Trim Paint

LE/2

— Section 2 — CAS No. Hazardous Ingredients (percent by weight)	ACGIH TLV <STEL>	OSHA PEL <STEL>	Units	Vapor Pressure (mm Hg)	Gloss	High Gloss
					A84 B 512 Tricorn Black; A84 W 501 Base A; A84 G 503 Base C; A84 W 506 Tinting White; A84 N 510 Chateau Brown; A84 W 507 Super White; A84 N 511 Plantation Brown; A84 Y 502 Base B; A84 R 533 Burgundy Base; A84 Y 508 Yellow Corn	A85 B 512 Tricorn Black; A85 W 501 Base A; A85 G 503 Base C; A85 W 506 Tinting White; A85 R 530 Red Base; A85 W 507 Super White; A85 R 533 Burgundy Base; A85 Y 502 Base B; A85 T 504 Neutral Base
107-21-1 § Ethylene Glycol.	C 50	C 50	PPM	0.1	< 3% may be added due to tinting	0 - 5
111-77-3 2-(2-Methoxyethoxy)-ethanol	Not Established			1.0		1 in Red Base only
111-76-2 § 2-Butoxyethanol	25	25	PPM (Skin)	0.6		0.3 - 1
112-34-5 § 2-(2-Butoxyethoxy)-ethanol	Not Established			0.1	0.9 - 2	
64742-54-7 Heavy Paraffinic Oil.	5	5	Mg/M3	as Mist	1 in Base C only	
14464-46-1 Cristobalite	0.05	0.05	Mg/M3	as Resp. Dust	0.1 - 0.8	
1332-58-7 Kaolin	2	5	Mg/M3	as Resp. Dust	0 - 2	
13463-67-7 Titanium Dioxide.	10	10[5]	Mg/M3	as Dust [Resp. Fraction]	0 - 19	0 - 20
1314-13-2 Zinc Oxide	10	10[5]	Mg/M3	as Dust [Resp. Fraction]	0-3	
1333-86-4 Carbon Black.	3.5	3.5	Mg/M3		0-2	0 - 2
§ Antimony Compound. [% Antimony]					8 [1.0] in Yellow Corn only	
§ Nickel Compound. [% Nickel]					8 [0.3] in Yellow Corn only	
§ Zinc Compound. [% Zinc]					0 [0.0] - 3 [2.1]	
Weight per Gallon (lbs.)					8.8 - 10.3	8.7 - 10.3
Percent Water					47.4 - 58.0	41.5 - 54.7
VOC (Volatile Organic Compounds) Total - lbs./gal.					0.4 - 0.5	0.4 - 0.5
VOC Less Water & Federally Exempt Solvents - lbs./gal.					1.0 - 1.3	0.9 - 1.1
Flash Point (°F) / HMIS (NFPA) Rating (health - flammability - reactivity)					None 2* - 0 - 0	None 2* - 0 - 0

PERCENT BY WEIGHT

§ Ingredient subject to the reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313, 40 CFR 372.65 C

17446-7

→→→ MSDS Text Page Follows →→→

Section 3 — Physical Data

PRODUCT WEIGHT	See TABLE	*EVAPORATION RATE*	Slower than Ether
SPECIFIC GRAVITY	1.05-1.41	*VAPOR DENSITY*	Heavier than Air
BOILING RANGE	212-477 °F	*MELTING POINT*	N.A.
VOLATILE VOLUME	57-75 %	*SOLUBILITY IN WATER*	N.A.
pH	8.5-9.5	*PHOTOCHEMICALLY REACTIVE*	No

Section 4 — Fire And Explosion Hazard Data

FLAMMABILITY CLASSIFICATION *FLASH POINT* Not Applicable *LEL* N.Ap. *UEL* N.Ap.
Not Applicable
EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam
UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 5 — Health Hazard Data

ROUTES OF EXPOSURE
Exposure may be by INHALATION and/or SKIN or EYE contact, depending on conditions of use. To minimize exposure, follow recommendations for proper use, ventilation, and personal protective equipment.
ACUTE Health Hazards
EFFECTS OF OVEREXPOSURE
Irritation of eyes, skin and upper respiratory system. In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
EMERGENCY AND FIRST AID PROCEDURES
If INHALED: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
If on SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
If SWALLOWED: Get medical attention.
CHRONIC Health Hazards
Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.
Carbon Black is classified by IARC as possibly carcinogenic to humans *(group 2B) based on* experimental animal data, however, there is insufficient evidence in humans for its carcinogenicity.
Ethylene Glycol is considered an animal teratogen. It has been shown to cause birth defects in rats and mice at high doses when given in drinking water or by gavage. There is no evidence to indicate it causes birth defects in humans.
Prolonged overexposure to solvent ingredients in Section II may cause adverse effects to the liver and urinary systems.
Rats exposed to titanium dioxide dust at 250 mg./m3 developed lung cancer, however, such exposure levels are not attainable in the workplace.

Section 6 — Reactivity Data

STABILITY – Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION – Will Not Occur

Section 7 — Spill Or Leak Procedures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate and remove with inert absorbent.
WASTE DISPOSAL METHOD
Waste from these products is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State, and Local regulations regarding pollution.

Section 8 — Protection Information

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using.
These coatings may contain materials classified as nuisance particulates (listed "as Dust" in Section II) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section II, the applicable limits for nuisance dusts are ACGIH TLV 10 mg./m3 (total dust), 3 mg./m3 (respirable fraction), OSHA PEL 15 mg./m3 (total dust), 5 mg./m3 (respirable fraction).
VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.
RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section II.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.
PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section II.
EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

Section 9 — Precautions

DOL STORAGE CATEGORY – Not applicable
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Section 10 — Other Regulatory Information

CALIFORNIA PROPOSITION 65
WARNING: A6B550, A6G514, A6N507, A6N556, A6W16, A6W501, A6W515, A6W520, A6W596, A6Y516, A16G203, A16R201, A16W200, A16W201, A16Y202, A80B512, A80G503, A80N510, A80N511, A80N501, A80W506, A80W507, A80Y502, A82B550, A82G514, A82N507, A82N556, A82W501, A82W510, A82W515, A82W596, A82Y516, A85B512, A85R530, A85W501, A85W506, A85W507, A89B512, A89G503, A89N511, A89W501, A89W506, A89W507, A89Y502, B15B250, B15W201, B15W215, B15W296, B17B450, B17G414, B17W415, B17W496, B17Y416, B42W42, C1W501 and C1W502 contain a chemical known to the State of California to cause cancer.
A6R503, A6R533, A6Y554, A8B512, A8G513, A8N503, A8N515, A8R533, A8W16, A8W524, A8W525, A8W541, A8W502, A8Y558, A16R233, A80Y508, A80R533, A82R533, A82Y554, A84B512, A84G503, A84N510, A84N511, A84R533, A84W501, A84W506, A84W507, A84Y502, A84Y508, A85G503, A85R533, A85T504, A85Y502, A89N510, A89R533, A89Y508, B15G214, B15R233, B15Y216, B17R433, B17W410, B22G100, B22N102, B22R101, B22R133, B22W101, B22W102, B22Y100, B36G300, B36R533, B36W300, B36W301, B36W302, B36W306, B36Y300, B36Y304, B77G500, B77R533, B77W501, B77W502, B77W506, and B77Y500 contain chemicals known to the State of California to cause cancer.

TSCA CERTIFICATION
All chemicals in these products are listed, or are exempt from listing, on the TSCA Inventory.

The above information pertains to these products as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to these products may substantially alter the composition and hazards of these products. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Material Safety Data Sheet

1. Chemical Product and Company Identification

DESCRIPTION: ELMER'S CARPENTERS WOOD GLUE
PRODUCT TYPE: PVAC BASED ADHESIVE
APPLICATION: FOR PRODUCT CODES SEE SECTION 16

• • Manufacturer/Supplier Information

MSDS Prepared by:
Elmer's Products, Inc.
1 Easton Oval
Columbus, OH 43219

Emergency Phone Number
Poison Control Center
888-516-2502

For additional health, safety or regulatory information, call 888-435-6377
Call 1-800-848-9400 to place an order or request additional MSDSs.

2. Composition, Information on Ingredients

No hazardous ingredients known to company.

3. Hazards Identification

3.1 Emergency Overview

Appearance: Light yellow liquid
Odor: Mild acetic aroma
Not an immediate health hazard.

• • HMIS Rating

HEALTH = 0 (minimal)
FLAMMABILITY = 0 (minimal)
REACTIVITY = 0 (minimal)

3.2 Potential Health Effects

• • Immediate Hazards

INGESTION: No hazards known to company.
INHALATION: No hazards known to company.
SKIN: No hazards known to company.

EYES: No hazards known to company.

• • Delayed Hazards

None of the components present in this product at concentrations equal to or greater than 0.1% have been listed by NTP, classified by IARC, nor regulated by OSHA as a carcinogen.

4. First Aid Measures

INGESTION: If accidentally swallowed, dilute by drinking large quantities of water. Immediately contact poison control center or hospital emergency room for any other additional treatment directions.

EYES: Immediately flush eyes with plenty of water. Call a physician if irritation persists.

5. Fire Fighting Measures

Autoignition Temperature	Not available
Upper/Lower Flammable Limits	Not applicable
Up/Lower Explosive Limits, % by Vol	Not applicable
Flash Point	Not applicable

Will not burn unless water has evaporated. Dried material may burn.

In case of fire, water should be used to keep fire-exposed containers cool.

6. Accidental Release Measures

Soak up with absorbent material and remove to a chemical disposal area. Prevent entry into natural bodies of water.

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices.

7.2 Storage

Keep from freezing.
Store in a cool, dry place.
Keep containers tightly closed.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

No special control measures necessary under normal conditions of use.

8.2 Personal Protection

No special protection necessary.

8.3 Exposure Guidelines

None established

9. Physical and Chemical Properties

Percent Volatiles	54.5
pH @ 25 C	5.0
Specific Gravity	1.08
Appearance	Light yellow liquid
Autoignition Temperature	Not available
Boiling Point	100°C (212°F)
Vapor Density (Air=1)	<1
Vapor Pressure, mm Hg @ 20 C	17.5
Evaporation Rate (Butyl Acetate=1)	<1
Upper/Lower Flammable Limits	Not applicable
Up/Lower Explosive Limits, % by Vol	Not applicable
Flash Point	Not applicable
Freezing Point	0°C (32°F)
Odor	Mild acetic aroma
Odor Threshold, ppm	Not available
Solubility in Water	Dispersible
Coefficient of Water/Oil Distrib.	Not available

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

- **Incompatibilities:**

Strong acids and alkaline materials.

- **Decomposition products may include:**

CO, CO2.

• • Hazardous polymerization:

Will not occur.

• • Other Hazards:

None known to company.

11. Toxicological Information

INGESTION:	A similar product was found to be non-toxic orally when tested as described in 16 CFR Part 1500.3(c)(1) and (2).
INHALATION:	A similar product was found to be non-toxic by inhalation when tested as described in 16 CFR Part 1500.3 (c)(1) and (2).
SKIN ABSORPTION:	A similar product was found to be non-toxic dermally when tested as described in 16 CFR Part 1500.3 (c)(1) and (2).
SKIN:	A similar product was not an irritant when tested as described in 16 CFR Part 1500.41.
EYES:	A similar product was not an irritant when tested as described in 16 CFR Part 1500.42.

12. Ecological Information

Not determined.

13. Disposal Considerations

Recover free liquid. Absorb residue and dispose of according to local, state/provincial, and federal requirements.

14. Transport Information

14.1 U.S. Department of Transportation (DOT)

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.
Non-Regulated.

14.2 Canadian Transportation of Dangerous Goods (TDG)

Non-Regulated.

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

• • OSHA Hazard Communication Standard 29CFR1910.1200

This material is not a "health hazard" or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

• • SARA Title III: Section 311/312

Does not meet any hazard category

• • SARA Title III Section 313 and 40 CFR Part 372

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.
None required per SARA TITLE III SECTION 313.

• • TSCA Section 8(b) Inventory

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by us.

15.2 Canadian Regulations

• • Workplace Hazardous Materials Information System (WHMIS)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.
Not a controlled product

• • Canadian Environmental Protection Act (CEPA)

All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

• • National Pollutant Release Inventory (NPRI)

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory. None required.

16. Other Information

AP (Non-Toxic): Products bearing the AP (Non-Toxic) Product Seal of The Art & Creative Materials Institute, Inc. (ACMI) are certified in a program of toxicological evaluation by a medical expert to contain no materials in sufficient quantities to be toxic or injurious to humans or to cause acute or chronic health problems. This program is reviewed by ACMI's Toxicological Advisory Board. These products are certified by ACMI to be labeled in accordance with the chronic hazard labeling standard, ASTM D-4236 and Federal Law, P.L. 100-695. In addition, there is no physical hazard as defined within 29 CFR Part 1910.1200(c).
MSDS covers items:
U.S.: E614, E700, E701, E702, E704, E705, E706, E970, E980, E1367, E1825, E1850
Canada: 60613, 60614, 60615, 60616, 60617, 60618, 60619

• • User's Responsibility

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Educate and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

• • Disclaimer

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

CURRENT ISSUE: 27-JUN-06
PREVIOUS ISSUE: 13-JAN-05

MATERIAL SAFETY DATA SHEET
September 1, 2009

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Chromated Copper Arsenate (CCA) Pressure Treated Wood
General Use: Treated Wood Products
Synonyms: CCA Treated Wood with Water Repellant, CCA Treated wood with Mold Inhibitor, CCA Treated Wood with Wax, CCA Treated Wood with Oil, CCA Treated Wood with Polymer, CCA treated formaldehyde bonded wood products, CCA Treated Poles, Piles and Posts.

MANUFACTURER:
WOOD TREATERS, LLC
PO Box 41604
Jacksonville, FL 32203

EMERGENCY TELEPHONE NUMBERS:
904-358-2507, 800-330-7283
FOR MORE INFORMATION PLEASE SEE:
www.woodtreaters.com

2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	PERCENT[1]	CAS #	EXPOSURE LIMITS (mg/m3 except where noted)		
			OSHA-PEL	ACGIH-TLV	OSHA-STEL
Chrome III (as Cr)	<3	7440-47-3	0.5	0.5	None
Chrome VI[2]	Trace	18540-29-9	5µg/m^3 2. 5µg/m^3 (action level)	0.01 (as Cr)	0.1 (as CrO_3) Ceiling
Arsenic V (as As)[3]	<3	7440-38-2	0.01	0.01	None
Copper Oxide (as Cu) (dusts/mists)	<3	7440-50-8	1.0	1.0	None
Wood Dust[4]					
Western Red Cedar	>91	N/A	15(total) 5.0 (respirable)	0.5 (inhalable)	None
All other Species			15(total) 5.0 (respirable)	1.0 (inhalable)	
Formaldehyde[5]	<0.1	50-00-0	0.75ppm	0.37 (Ceiling)	2ppm

Notes: Chromic Acid, Arsenic Acid, and Copper oxide are present in the preservative used to treat this wood
[1]Actual retention may vary due to differences in wood stock and treatment retention levels.
[2]Although the Chrome VI present in the Chromic Acid used to treat this wood is reduced to Chrome III during the treating and fixation processes, some Chrome VI may be present. Due to this, OSHA's Hexavalent Chromium Rule (29 CFR 1910.1026) may apply. The manufacturer of this treated wood has monitoring data indicating the levels will be below the established limits and action levels when used under usual conditions. If unusual circumstances exist, monitoring may be required.
[3]The arsenic pentoxide present in this product is not subject to the OSHA Arsenic standard 29CFR 1910.1801
[4]A state-run OSHA program may have more stringent limits for wood dust and/or PNOR.
[5]Only applies to Plywood Products

3. HAZARDS IDENTIFICATION

WARNING! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING)

Inhalation: Airborne treated or untreated wood dust may cause nose, throat or lung irritation. Various species of untreated wood dust can elicit allergic respiratory response in sensitized persons.
Eye Contact: Treated or untreated wood dust may cause mechanical irritation.
Skin Contact: Handling wood may result in skin exposure to splinters. Prolonged and/or repeated contact with treated or untreated wood dust may result in mild irritation. Various species of untreated wood dust can elicit allergic type skin irritation in sensitized persons.
Ingestion: Not anticipated to occur. A single ingestion of a very large dose of treated wood dust may require immediate medical attention.
Chronic Wood Dust (treated or untreated) Effects: Wood dust, depending on species, may cause dermatitis on prolonged, repetitive contact; may cause respiratory sensitization and/or irritation.

4. FIRST AID MEASURES

Inhalation: Remove from wood dust exposure. If breathing has stopped, administer artificial respiration. Seek medical aid if symptoms persist.
Eye Contact: Gently flush any particles from the eyes with large amounts of water for at least 15 minutes. DO NOT RUB THE EYES. Seek medical aid if irritation persists.
Skin Contact: Rinse wood dust off with water. DO NOT RUB. Once the skin is free of the wood dust, wash thoroughly with soap and water. Seek medical aid if severe irritation develops.
Ingestion: Rinse the victim's mouth out with water. Do not induce vomiting. If symptoms develop, call a physician. One ounce of treated wood dust per 10 pounds of body weight ingested may cause acute arsenic intoxication.

5. FIRE FIGHTING MEASURES

Flash Point	NA	**Lower Explosive Limit**	NA
Auto-ignition	NA	**Upper Explosive Limit**	NA

Extinguishing Agents: Not applicable

Fire-Fighting Procedures: Fire from a separate fuel source may be intense enough to cause thermal decomposition releasing toxic fumes and/or gases. Wear complete fire service protective equipment, including full-face NIOSH/NFPA – approved self-containing breathing apparatus.

Fire and Explosion Hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. High airborne levels of wood dust may burn rapidly in the air when exposed to an ignition source.

6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Not applicable.

Waste Disposal: See Section 13.

Other: Dust Deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Nonsparking tools should be used.

7. HANDLING AND STORAGE

Storage Conditions: Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Maintain good housekeeping. Protect from physical damage.

Caution: DO NOT BURN TREATED WOOD. Do not use pressure treated chips or sawdust as mulch. Whenever possible, sawing or machining treated or untreated wood should be performed outdoors to avoid accumulations of airborne wood dust. Wash hands thoroughly before eating, drinking, using tobacco products, and/or using restrooms.

NOTE: For plywood products, provide adequate ventilation to reduce the possible buildup of formaldehyde vapors.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: None normally required. When sawing or cutting treated or untreated wood, wear a NIOSH approved N95 or better dust mask.

Eye Protection: Wear safety glasses with side shields or safety goggles when sawing or cutting.

Skin/Foot Protection: Wear leather or comparable gloves to prevent splinters. Wear long sleeve shirt, pants and steel toed shoes when handling treated or untreated wood

Ventilation: Saw, cut or machine wood outdoors or in well ventilated areas. Ventilation should be sufficient to maintain inhalation exposures below OSHA PEL for particulates. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen- deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Other Protective Equipment: Wear ear plugs or muffs when using power tools. Use only appropriately classified electrical equipment and powered industrial trucks.

NOTE: For plywood products only, if Formaldehyde vapor level exceeds OSHA PEL or STEL, then a NIOSH Approved respirator is required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light to dark green	**Specific Gravity (Water =1)**	NA
Odor	None	**Boiling Point**	NA
Solubility in Water	NA	**Vapor Density (Air=1)**	NA
Physical State	Solid	**Vapor Pressure**	NA
pH	NA	**Freezing Point**	NA

10. STABILITY AND REACTIVITY

Conditions Contributing to Instability: None known.

Incompatibilities: Strong acids, open flame and oxidizers.

Hazardous Reactions/Decomposition/Combustion Products: Contact with strong acid may release metals. Combustion products may include smoke, oxides of carbon, nitrogen and copper. If the fire is intense enough, some arsenic trioxide may be released into the smoke. The metals will remain in the ash if the wood is burned.

Hazardous Polymerization: Does not occur.

11. TOXICOLOGICAL INFORMATION

Study Abstracts: In Hawaii, where over 45,000 homes have been built almost entirely of CCA-treated wood, a study was conducted by the Pacific Biomedical Center of the University of Hawaii (the Budy-Rashad study) in 1977 to determine any possible effect on the health of carpenters. The study concluded that exposure to CCA-treated sawdust is not associated with increased risk of total cancer, lung cancer or lymphatic cancer and shows that excess respiratory cancer mortality was not observed in the carpenters.

A study was conducted by the University of Alabama to evaluate the teratogenicity of CCA-impregnated sawdust when exposed to rabbits and mice. Sawdust from CCA-treated wood has been shown not to cause chromosome damage or teratogenic effects in mice fed sawdust nor to cause birth defects in rabbits receiving sawdust applied to their skin.

According to a Human Health Risk Assessment conducted by Gradient Corporation in August 2004, potential health risks to workers and residents do not exceed U.S. Environmental Protection Agency acceptable risk limits. Although the arsenic complex (the predominate chemical form of arsenic in CCA-treated wood is chromium III arsenate) is present on the surface of CCA-treated utility poles and in surrounding soils, the arsenic in these poles is chemically bonded to the wood and is not readily absorbed in the body. This risk assessment evaluated exposures to arsenic complex on the surface of CCA treated utility poles and in soil adjacent to the poles. Exposure was evaluated for both hand to mouth contact and skin contact for a child resident age 2-6 and an adult utility pole worker. The assessment results also indicate that the amount of arsenic complex potentially taken into the body from exposures to CCA-treated utility poles and adjacent soils for a child resident is approximately 8 fold less than the intake of naturally occurring inorganic arsenic in food and drinking water at the new federal drinking water standard for arsenic. An adult worker is exposed to over 24 fold less arsenic complex associated with CCA-treated utility poles, compared to intake of inorganic arsenic form food and drinking water.

Carcinogenic status: IARC, the NTP, OSHA and California Proposition 65 do not consistently distinguish among arsenic or chrome species but list inorganic arsenic and chromium and certain chromium compounds as human carcinogens. Cancers in humans have followed from long term consumption of Fowler's Solution, a medicinal trivalent arsenical; inhalations and skin contact with inorganic trivalent arsenical sheep-dust; the combined inhalation of arsenic trioxide (trivalent arsenical), sulfur dioxide, and other particulates from ore smelting in arsenic trioxide production; and occupational exposure to nonwater-soluble hexavalent chromium.

Carcinogenicity Data: IARC has classified untreated hardwood and hardwood/softwood mix wood dust as a Group I human carcinogen. The wood dust classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with occupational exposures to untreated wood dust. NTP has classified all untreated wood dust as a carcinogen.

12. ECOLOGICAL INFORMATION

Study Abstracts: A technical paper published in the Forest Products Journal (September, 1974) by Levi, Huisingh and Nesbitt described a study conducted to determine if CCA wood preservative in grapevine support posts might be absorbed by the vines, leaves and/or grapes. This study concluded that "... CCA preservatives are bound in wood, are not readily leached and are not concentrated in plants growing close to the treated wood."

The Springborn Laboratories Environmental Sciences Division in 1993 conducted a sediment exposure study using leachate from CCA treated and untreated marine pilings and exposing Ampelisca abdita for a period of 10 days. Survival of the organisms during the 10-day exposure period was the biological endpoint used to establish the effects of exposure. Results indicated that leachate from treated pilings had no adverse effect on organism survival. It was concluded that the primary constituents of the CCA-treated wood piling were not present in the leachate at concentrations which would adversely affect the survival of the organisms.

Testing has been conducted to evaluate the use of treated wood in raised vegetable gardens. Vegetables harvested from gardens in raised bed structures built of CCA-treated wood were compared with vegetables grown in untreated raised bed structures and with vegetables purchased at a local grocery store. Testing revealed that all vegetables contained minuscule amounts of each element in CCA. In some cases, the levels of metals were actually higher in the vegetables grown in untreated bins, and in one case the store-purchased vegetable had the highest level of arsenic. The report concluded that there was "no uptake of the metal constituents into the vegetables."

12. ECOLOGICAL INFORMATION (CONT)

The Food and Drug Administration's (FDA) "Market Basket Survey" has consistently shown that arsenic in tomatoes is below the analytical level of detection despite the increased usage of arsenically-treated wood for tomato stakes. Moreover, even though CCA-treated wood has been increasingly used in applications such as cattle bunks and stalls and poultry brooders for the last ten years, the FDA survey has shown a decrease in the arsenic content of dairy, meat and poultry products.

A study funded in part by the National Oceanic and Atmospheric Administration (NOAA) and prepared by the Marine Resources Division of the South Carolina Department of Natural Resources in 1995 measured the impact of wood preservative leachate from docks in an estuarine environment. Copper, chromium, arsenic, and polynuclear aromatic hydrocarbons (PAHs) were measured in composite samples of sediments and naturally occurring oyster populations from creeks with high densities of docks, and from nearby reference creeks with no docks. Sediments from all but one site had metal and total PAH concentrations which were below levels reported to cause biological effects, and the oysters showed no significant difference in their physiological condition. Bioassays were also conducted on four common estuarine species and hatchery-reared oysters. The results suggest that wood preservative leachates from dock pilings have no acutely toxic effects on these common species, nor do they affect the survival or growth of juvenile oysters over a six-week period. In some cases, metal leachates may accumulate in sediments and oysters immediately adjacent to pilings, but do not appear to become concentrated in sediments or oysters elsewhere in the same creeks.

13. DISPOSAL CONSIDERATIONS

Disposal Guidance: DO NOT BURN TREATED WOOD. Do not use pressure treated chips or sawdust as mulch. Dispose of in accordance with local, state and federal regulations. This product is exempted as a hazardous waste under any sections of the RCRA regulations as long as the product is being utilized for its intended end use as stated in 40 CFR 261.4 (b) (9). State run hazardous waste programs may be more stringent.

14. TRANSPORT INFORMATION

DOT Hazardous Material Classification: This material is not regulated as a hazardous material by the DOT.

15. REGULATORY INFORMATION

RCRA (40 CFR 261): DO NOT BURN TREATED WOOD. Do not use pressure treated chips or sawdust as mulch. Dispose of in accordance with local, state and federal regulations. This product is exempted as a hazardous waste under any sections of the RCRA regulations as long as the product is being utilized for its intended end use as stated in 40 CFR 261.4 (b) (9). Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Check local and state regulations, as they may be more stringent.

OSHA (29 CFR 1910.1200): This product is regulated under the Hazard Communication Standard.

SARA 313 (40 CFR 372): Unless exempted, this product may require a Toxic Release Inventory reporting for individual material uses of 25,000 pounds or more. Reporting is under Copper Compounds, Chromium Compounds and Arsenic Compounds. It is the user's responsibility to determine applicability of reporting requirements and exemptions.

California Proposition 65: This product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. (This statement issued in accordance with California Proposition 65).

NFPA: Refer to NFPA 654, *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids*, for safe handling.

ABBREVIATIONS

OSHA	Occupational Safety and Health Administration	**TLV**	Threshold Limit Value
NFPA	National Fire Protection Association	**STEL**	Short-Term Exposure Limit
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act	**RCRA**	Resource Conservation and Recovery Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	**ACGIH**	American Conference of Governmental Industrial Hygienists
SARA	Superfund Authorization and Reauthorization Act	**NIOSH**	National Institute of Occupational Safety and Health
PEL	Permissible Exposure Limit	**TSCA**	Toxic Substances Control Act
DOT	Department of Transportation	**IARC**	International Agency for Research on Cancer
NTP	National Toxicology Program	**IBC**	International Building Code
CFR	Code of Federal Regulations	**mg/m3**	Milligrams per cubic meter
CWA	Clean Water Act	**CAA**	Clean Air Act
CAS	Chemical Abstracts Service		

Material Safety Data Sheet

Section 1 General Information

Manufacturer:
Zinsser Company, Inc.
173 Belmont Drive
Somerset, NJ 08875
(732) 469-8100

Emergency Telephone: Chemtrec (800) 424-9300 **Date: December 1, 2006**

Product Name: Parks Paint Thinner

Codes: **002011** **002012** **002015** **002023**

Section 2 Hazardous Ingredients

Hazardous Component	CAS#	OSHA PEL	ACGIH TLV
Stoddard Solvent	8052-41-3	500 ppm	100 ppm
1,2,4 Tri Methyl Benzene	95-63-6	10 ppm (TWA) 25 ppm (Ceiling)	25 ppm

Section 3 Hazard Identification

Emergency Overview: This material is a colorless liquid with a characteristic kerosene-like odor. It is flammable and has a flash point of 105° F. The vapor is heavier than air and may travel along the ground. Ignition of the vapor by distant ignition sources is possible.

Primary Routes of Exposure:

Skin Contact
Eye Contact
Inhalation

Potential Acute Health Effects:

Eye: Contact may cause eye irritation.

Skin: May cause skin irritation. Repeated or prolonged contact with skin may cause dermatitis.

Ingestion: May be harmful if swallowed. This material may pose an aspiration hazard. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis. The substance may cause effects on the central nervous system. This substance may cause gastrointestinal tract distress and central nervous system depression.

Inhalation: High vapor concentrations may be irritating to the eyes, nose, throat and lungs.

Potential Chronic Health Effects: The substance may defat the skin. This substance may have effects on the central nervous system.

Target Organ: Eyes, skin, respiratory system, central nervous system, kidneys.

(See also Sections 4, 8, and 11 for related information)
Signs and Symptoms: None known

(See also Sections 4, 8, and 11for related information)

Section 4 First Aid Measures

Eye contact: Immediately flush eyes with water for at least 15 minutes. Get medical attention if irritation persists.

Skin contact: Wash thoroughly with soap and water. Get medical attention if irritation develops or persists.

Ingestion: If swallowed, Contact a physician or Poison Control Center. This material may pose an aspiration hazard. Do Not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. The symptoms of chemical pneumonitis often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Section 5 Fire Fighting Measures

Flash Point (method): 105°F, TCC.

Extinguishing Media: Foam, Dry Chemical, Water Fog, CO_2

Protection of Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH and full protective gear. Evacuate area and fight fire from safe distance.

LEL: 1.0% **UEL:** 6.0%

Section 6 Accidental Release Measures

Clean Up Methods: Eliminate all ignition sources. Keep unnecessary people away. Dike and contain spill with inert material (sand, earth, etc.). Transfer liquid to containers for recovery or disposal, or absorb with absorbent materials and place into containers for disposal. Keep spill out of sewer and open bodies of water. Floors may be slippery; care should be exercised to avoid falls during clean up operations.

(See also Section 8 for information on Exposure Controls and Personal Protective Equipment)

Section 7 Handling and Storage

Handling: Keep away from heat, sparks and open flame. Use with adequate ventilation. Keep container closed. Personnel should avoid inhalation of vapors. Personal contact with the product should be avoided. Should contact be made, remove saturated clothing and flush affected areas with water.

Storage: Keep away from heat, sparks and open flame. Keep container closed

Section 8 Exposure Controls / Personal Protection

Engineering Controls: Use in well-ventilated areas. If necessary use mechanical local exhaust ventilation or general room dilution ventilation to reduce vapor concentrations.

Personal Protective Equipment (PPE):

Eye Protection: Prevent eye contact. Wear chemical splash goggles or similar eye protection if the potential exists for eye contact.

Skin Protection: Prevent skin contact. Wear chemical-resistant flexible-type gloves (neoprene, PVC, butyl, nitrile or similar). Depending on conditions of use additional protective equipment may be necessary such as face-shield, apron or coveralls.

Respiratory Protection: None required for normally expected use conditions. If occupational exposure limits are exceeded or if irritation is experienced, wear an appropriate NIOSH approved respirator with organic vapor cartridges.

General Hygiene Practices: Wash after handling material. Prevent Eye contact. Avoid prolonged skin and inhalation contact. Wash thoroughly before handling food, cosmetics, or before smoking. Remove contaminated clothing and launder before reuse.

Section 9 Physical Data

Appearance:	Colorless liquid	**Odor:**	Kerosene-like odor.
Physical State:	Liquid	**pH:**	N/A
Boiling Point:	310 – 405° F	**Melting Point:**	N/D
Vapor Pressure:	2 mmHg	**Vapor Density:**	4.9
Odor Threshold:	N/D	**Viscosity:**	N/D
Solubility in Water:	Negligible (<5%)	**Specific Gravity:**	0.78

Section 10 Stability and Reactivity

Hazardous Polymerization: Will not occur.

Hazardous Decomposition Products: Reacts with chloroform and bromoform under basic conditions, causing fire and explosion hazard.

Stability: Stable.

Incompatibility: Strong oxidizers. May react with strong oxidizer causing fire and explosion hazard. Attacks some forms of plastics, rubber, and coatings.

Section 11 Toxicological Information

Carcinogenicity: This material is not listed as a carcinogen by IARC, NTP or OSHA.

(See also Section 15 for related information)

Section 12 Ecological Information

Chemical Fate and Effects: None known

Section 13 Disposal Considerations

RCRA Hazardous Waste: This material, when discarded or disposed of, could be a hazardous waste according to federal regulations (40 CFR 261) due to characteristics of ignitability (D001). The transportation, storage, treatment, and disposal of this waste must be conducted in compliance with 40 CFR 262,263,264,268, and 270. Disposal can only occur in properly permitted facilities. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate, or otherwise inappropriate.

Section 14 Transportation Information

Regulated by the DOT: No, (Combustible liquid)

DOT Proper Shipping Name: N/A

UN / NA Number: N/A

Hazard Class: N/A

Packing Group: N/A

Section 15 Regulatory Information

CERCLA:
The Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification to the National Response Center for releases of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4 (for CERCLA 102).

Components present in this product at a level which could require reporting under the statute are:

Chemical Name	CAS#	Maximum Concentration (Wt. %)
None	N/A	N/A

SARA Title III, section 311/312:
The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312).

Components present in this product at a level which could require reporting under the statute are:

Chemical Name	CAS#	Maximum Concentration (Wt. %)
None	N/A	N/A

SARA Title III, section 313:
The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313).

Components present in this product at a level which could require reporting under the statute are:

Chemical Name	CAS#	Maximum Concentration (Wt. %)
1,2,4 Tri Methyl Benzene	95-63-6	3.5%

TSCA:

The components of this mixture are listed in the Toxic Substance Control Act Inventory of Chemical Substances.

This product does not contain any chemicals that require export notification under Section 12(b) of the TSCA regulation.

Section 16 Other Information

Legend: **N/A**: Not Applicable
N/D: Not Determined
N/E: Not Established
N/R: Not Required
cps: Centipoise
KU: Krebs Units
STEL: Short Term Exposure Limit
C: OSHA Ceiling Value
PPM: Parts Per Million
PPB: Parts Per Billion
PEL: Permissible Exposure Limit
TLV: Threshold Limit Value
TWA: Time Weighted Average
mg/m^3: Milligrams per cubic Meter
mppcf: Million particles per cubic foot of air.
ACGIH: American Conference of Governmental Industrial Hygienists
OSHA: Occupational Safety and Health Administration (US Dept. of Labor)
RCRA: Resource Conservation and recovery Act
SARA: Superfund Amendment and Reauthorization Act
TSCA: Toxic Substance Control Act
FHSA: Federal Hazardous Substance Act

Prepared By: Zinsser Health and Safety Manager, Regulatory Compliance Dept.
173 Belmont Drive Somerset, NJ 08875 (732) 469-8100

Disclaimer: Zinsser Co., Inc. believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials and make no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and data and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet
[OSHA 29 CFR 1910.1200]

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30329

Emergency Telephone Number
(770) 216-9580

Information Telephone Number
(770) 216-9580

Revision: July 2003

MSDS J

SECTION I: PRODUCT IDENTIFICATION

Product Types: QUIKRETE® DRY PACKAGED PORTLAND CEMENT BASED PRODUCTS (SERIES 1)

QUIKRETE® Product Name	Code #	QUIKRETE® Product Name	Code #
CONCRETE MIX	1101	FENCE POST MIX	1005
FIBER REINFORCED CONCRETE	1006	CRACK RESISTANT CONCRETE	1006-80
QUIKRETE® 5000	1007	LIGHT WEIGHT CONCRETE	1008
FAST SETTING CONCRETE	1004	RIP RAP	1129
SAND MIX	1103	VINYL CONCRETE PATCHER	1133, 1132
BASIC CONCRETE MIX	1015-60	HANDI-CRETE CONCRETE	1141
LIGHT WEIGHT SAND MIX	1103-51	HANDI-CRETE SAND MIX	1143
HIGH YIELD CONCRETE	1100	B-CRETE	1101-81
COMMERCIAL GRADE FASTSET™ CEMENT			1124-92
COMMERCIAL GRADE FASTSET™ NON SHRINK GROUT			1585-09
COMMERCIAL GRADE FASTSET™ REPAIR MORTAR			1241-60
COMMERCIAL GRADE FASTSET™ CONCRETE			1004-51
COARSE & FINE CORE FILL GROUTS (MASONRY GROUTS)			SR-9003, SR-9006
(ALSO APPLIES TO CUSTOM BLENDED AND PRIVATE LABEL CONCRETES AND MORTARS)			

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Silica Sand, crystalline	14808-60-7	$\frac{10}{\% SiO_2 + 2}$	0.05 (respirable)
Portland Cement	65997-15-1	5	5
Lime	01305-62-0	5	5
May contain one or more of the following:			
Amorphous Silica (From Fly Ash)	07631-86-9	$\frac{80\ mg/M^3}{\% SiO_2}$	10
Alumina (From Fly Ash)	01344-28-1	5	5
Limestone Dust	01317-65-3	5	5
Calcium Sulfate	10101-41-4 or 13397-24-5	5	5
Calcium Sulfo Aluminate	65997-16-2	15	10

Other Limits: NIOSH has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (50 ug/M^3) averaged over a work shift of up to 10 hours per day, 40 hours per week. The NIOSH Criteria Document for Crystalline Silica should be consulted for more detailed information.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: Gray to gray-brown colored powder. Some products contain coarse aggregate. (QUIKRETE Vinyl Concrete Patcher available in white)

Specific Gravity:	2.6 to 3.15	**Melting Point:**	>2700 °F	**Boiling Point:**	>2700 °F
Vapor Pressure:	None	**Vapor Density:**	None	**Evaporation Rate:**	None
Solubility in Water:	Slight	**Odor:**	None	**Solubility in Water:**	Slight

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Non combustible and not explosive.

SECTION V - REACTIVITY DATA

Stability: Stable.
Incompatibility (Materials to Avoid): Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, may cause fires.
Hazardous Decomposition or Byproducts: Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas - silicon tetrafluoride.
Hazardous Polymerization: Will not occur.
Condition to Avoid: Keep dry until used to preserve product utility.

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry:	Inhalation?	Yes
	Skin?	Yes
	Ingestion?	Yes

Acute Exposure: Product becomes alkaline when exposed to moisture. Exposure can dry the skin, cause alkali burns and effect the mucous membranes. Dust can irritate the eyes and upper respiratory system. Toxic effects noted in animals include, for acute exposures, alveolar damage with pulmonary edema.
Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs and possibly cancer. There is evidence that exposure to respirable silica or the disease silicosis is associated with an increased incidence of Scleroderma, tuberculosis and kidney disorders.

Carcinogenicity Listings:	NTP:	Known carcinogen
	OSHA:	Not listed as a carcinogen
	IARC Monographs:	Group 1 Carcinogen
	California Proposition 65:	Known carcinogen

NTP: The National Toxicology Program, in its "Ninth Report on Carcinogens" (released May 15, 2000) concluded that "Respirable crystalline silica (RCS), primarily quartz dusts occurring in industrial and occupational settings, is *known to be a human carcinogen*, based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to RCS and increased lung cancer rates in workers exposed to crystalline silica dust (reviewed in IAC, 1997; Brown *et al.*, 1997; Hind *et al.*, 1997)

IARC: The International Agency for Research on Cancer ("IARC") concluded that there was "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz or cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans (*Group 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances or studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of carcinogenic Risks to Humans, Volume 68, "Silica, Some Silicates..." (1997)

Signs and Symptoms of Exposure: Symptoms of excessive exposure to the dust include shortness of breath and reduced pulmonary function. Excessive exposure to skin and eyes especially when mixed with water can cause caustic burns as severe as third degree.

Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure.

Emergency First Aid Procedures:

Eyes: Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.

Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.

Inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalation of large amounts of portland cement require immediate medical attention.

Ingestion: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Spills: If spilled, use dustless methods (vacuum) and place into covered container for disposal or use if not contaminated or wet. Use adequate ventilation.

Waste Disposal Method: The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under RCRA or CERCLA.

SECTION VIII - CONTROL MEASURES

Inhalation: DO NOT BREATHE DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator is recommended. Local exhaust can be used, if necessary, to control airborne dust levels.

Eyes: Wear tight fitting goggles.

Skin: The use of barrier creams or impervious gloves, boots and clothing to protect the skin from contact is recommended. Following work, workers should shower with soap and water. Precautions must be observed because burns occur with little warning -- little heat is sensed.

WARN EMPLOYEES AND/OR CUSTOMERS OF THE HAZARDS AND REQUIRED OSHA PRECAUTIONS ASSOCIATED WITH THE USE OF THIS PRODUCT.

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects, which may be caused by exposure to silica contained in our products.

MATERIAL SAFETY DATA SHEET

DATE OF PRINTING: 3/5/2007

SECTION 1-PRODUCT IDENTIFICATION

MANUFACTURER: THE CHARGAR CORP.
299 WELTON ST.
HAMDEN,CT 06517
TELEPHONE-203-562-9948
EMERGENCY NUMBER: 1-800-922-4623
TRADE NAME: CONCRETE CURE AND SEAL WB 20

SECTION II - HAZARDOUS INGREDIENTS

	OSHA PEL	ACGIH TLV	%
STYRENE ACRYLATE POLYMER CAS NO. 25085-34-I			23
CAS NO. 6474I-65-7 WATER			67
EMULSIFIERS & OTHER ADDITIVES			2

SECTION III - PHYSICAL DATA

BOILING POINT: 760 MM HG 212F
MELTING POINT: N/A
SPECIFIC GRAVITY (H2O 1): .0959
VAPOR PRESSURE: 2.00 MM HG
VAPOR DENSITY: GREATER THAN AIR
SOLUBILITY BY WATER: 100%
% VOLATILES BY VOL.: 27
EVAPORATION RATE: 9.5
APPEARANCE AND ODOR: MILKY WHITE EMULSION

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >200 FTCC
AUTOIGNITION TEMP: N.D.
FLAMMABLE LIMITS IN AIR % BY VOL.
LOWER: N.D. UPPER: N.D.
EXTINGUISHING MEDIA: WATER, FOAM
SPECIAL FIRE FIGHTING PROCEDURES: NONE
UNUSUAL FIRE AND EXPLOSION HAZARD: PRODUCT WILL BURN IF TEMPERATURE EXCEEDS BOILING POINT OF WATER MIX. NO UNUSUAL HAZARDS.

SECTION V - REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: THIS PRODUCT IS STABLE
INCOMPATIBILITY: THIS PRODUCT IS INCOMPATIBLE WITH STRONG ACIDS
HAZARDOUS DECOMPOSITION PRODUCTS: THERMAL DECOMPOSITION IN THE PRESENCE OF AIR YIELDS CARBON MONOXIDE AND/OR CARBON DIOXIDE
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: NA

SECTION VI - HEALTH HAZARD DATA

ROUTES OF EXPOSURE:
INHALATION: VAPOR INHALATION CAN CAUSE NASAL AND RESPIRATORY IRRITATION, DIZZINESS, WEAKNESS, FATIGUE, NAUSEA OR HEADACHE.
SKIN CONTACT: PROLONGED OR REPEATED CONTACT CAN RESULT IN MODERATE IRRITATION
SKIN ABSORPTION: PROLONGED OR REPEATED CONTACT CAN RESULT IN MODERATE IRRITATION
EYE CONTACT: THIS PRODUCT CAN CAUSE SEVERE IRRITATION
INGESTION: CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING
EFFECTS OF OVEREXPOSURE: ANESTHESIA, HEADACHE, NAUSEA, DIZZINESS. LIQUIDS MODERATELY IRRITATING ON SKIN AND EYES
ACUTE OVEREXPOSURE: PROLONGED CONTACT ON THE SKIN WILL CLAY AND DEFAT THE SKIN POSSIBLY CAUSING DERMATITIS
EMERGENCY AND FIRST AID PROCEDURES:
EYES: FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. CONSULT A PHYSICIAN
SKIN: IMMEDIATELY WASH SKIN WITH SOAP AND WATER. IF IRRITATION PERSISTS, CONSULT A PHYSICIAN.
INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH TO MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. SEEK PROMPT MEDICAL ATTENTION.
INGESTION: DO NOT INDUCE VOMITING. SEEK PROMPT MEDICAL ATTENTION.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

WASTE DISPOSAL METHOD: TREATMENT TRANSPORTATION AND DISPOSAL MUST BE IN COMPLIANCE WITH EPA OR STATE REGULATIONS UNDER THE RESOURCES CONSERVATION AND RECOVERY ACT. TYPICALLY CONTROLLED BURNING, INCINERATION OR APPROVED LAND FILL ARE AVAILABLE.
STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: ELIMINATE ALL IGNITION SOURCES. PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN UP IS COMPLETE. STOP SPILL AT SOURCE, DIKE SPILL AREA TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID CAN BE TAKEN UP ON SAND, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS.

SECTION VIII - CONTROL MEASURES

VENTILATION REQUIREMENTS: LOCAL MECHANICAL VENTILATION MAY BE SUFFICIENT TO KEEP PRODUCT VAPOR CONCENTRATION WITHIN SPECIFIED TIME. WEIGHTED TLV RANGES. IF LOCAL VENTILATION PROVES INADEQUATE TO MAINTAIN SAFE VAPOR CONCENTRATIONS SUPPLEMENTAL LOCAL EXHAUST MAY BE REQUIRED. OTHER SPECIAL PRECAUTIONS SUCH AD RESPIRATORY MASKS OR ENVIRONMENTAL CONTAINMENT DEVICES MAY BE REQUIRED IN EXTREME CASES.
RESPIRATORY: CHEMICAL CARTRIDGE RESPIRATOR HALF MASK ORGANIC VAPOR

Universal Cooperatives, INC

MATERIAL SAFETY DATA SHEET

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Marketed and Distributed by:
Country*Energy*, LLC
P.O. Box 64089
Mail station 525
St. Paul, MN 55164-0089

Transportation Emergency (CHEMTREC): 1-800-424-9300
Technical Information: 1-651-306-8443
MSDS Information: 1-651-306-8438

Manufactured by: Cenex Harvest States Cooperatives

PRODUCT NAME: CONCRETE FORM OIL

MSDS: 0132-H4X0 - Rev.A (5.5.99)

COMMON NAME: Form release oil

CHEMICAL FORMULA: Mixture

CHEMICAL NAME: Lubricating Oil

CHEMICAL FAMILY: Hydrocarbon

Section 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

INGREDIENTS	PERCENTAGES (by weight)	PEL (OSHA)	TLV (ACGIH)	CAS #
Oil, Naphthenic	90-100%	N/A	5 mg/m3 TWA (Oil Mist)	64742-53-6
Performance Additives	Proprietary			

(TWA) - Time Weighted Average is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded.
(STEL) - Short Term Exposure Limit is the employee's 15-minute time weighted average exposure which shall not be exceeded at any time during a work day unless another time limit is specified.

Section 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

POTENTIAL HEALTH EFFECTS
ROUTES OF ENTRY: (Eye Contact, Dermal, Inhalation.)

ACUTE EFFECTS OF OVER EXPOSURE:

Eyes - Contact with eyes may cause irritation.

Skin - Contact with skin may cause irritation.

Inhalation - May cause irritation of the nose and throat.

Ingestion - May cause nausea and vomiting. Large quantities may effect the central nervous system.

CHRONIC EFFECTS OF OVER EXPOSURE: No adverse effects anticipated.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Existing dermatitis and respiratory conditions.

CARCINOGENICITY: NTP: No **IARC:** No **OSHA:** No

Section 4 - FIRST AID MEASURES

EMERGENCY AND FIRST AID PROCEDURES:

Eye Contact - If material comes in contact with the eyes, immediately wash the eyes with large amounts of water for fifteen minutes, occasionally lifting the lower and upper lids. Get medical attention.

Skin Contact - If the material comes in contact with the skin, wash the contaminated skin with soap and water promptly. If the material penetrates through clothing, remove the clothing and wash the skin with soap and water promptly. If irritation persists after washing, get medical attention immediately.

Inhalation - If person breathes in large amounts of material, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Keep the person warm and at rest. Get medical attention as soon as possible.

Ingestion - If material has been swallowed, do not induce vomiting. Get medical attention immediately.

Section 5 - FIRE - FIGHTING MEASURES

FLASH POINT: >290°F (>144°C) **AUTO IGNITION TEMP:** >500°F

FLAMMABLE LIMITS IN AIR % BY VOLUME	**LOWER**	**UPPER**
	N/A	N/A

EXTINGUISHING MEDIA: Use water spray to cool fire exposed surfaces and to protect personnel. Use foam, dry chemical or water spray (fog) to extinguish fire.

SPECIAL FIRE FIGHTING PROCEDURES: When fighting fires wear full turnout gear and self contained breathing apparatus. Water may cause splattering. Material floats on water.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Toxic fumes gases or vapors may evolve on burning.

HAZARD RATINGS:				
	NFPA 704:	Health- 1	Fire- 1	Reactivity- 0
	HMIS:	Health- ___	Fire- ___	Reactivity- ___

Section 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO TAKE IF MATERIAL IS RELEASED OR SPILLED: Personal protective equipment should be worn. Ventilate area if confined or poorly ventilated. Contain with dikes or absorbent to prevent migration to sewers/streams. Take up small spill with dry chemical absorbent; large spills may require pump or vacuum prior to absorbent. May require excavation of severely contaminated soil. Avoid contact with skin and eyes.

Section 7 - HANDLING AND STORAGE

HANDLING AND STORING: Store in closed container away from all ignition sources. Handling temperatures should not exceed 175°F (80°C). Wash thoroughly after handling. Do not store at temperatures exceeding 113°F (45 C). Odorous and toxic fumes may form from the decomposition of this product if stored at excessive temperatures for extended periods of time. Open containers carefully and only in well ventilated areas or use appropriate respiratory protection. Store in well ventilated area.

Section 8 - EXPOSURE CONTROL - PERSONAL PROTECTION

ENGINEERING CONTROLS: Ventilate to control mists and vapors below exposure limits.

RESPIRATORY EQUIPMENT: Normally not required, if exposure limits are exceeded use a Niosh approved organic vapor respirator. Self contained breathing apparatus is recommended for entry into confined spaces or other poorly ventilated areas and for large spill clean-up sites.

EYE PROTECTION: Chemical goggles or face shield recommended to minimize eye contact.

PROTECTIVE CLOTHING: Impervious (nitrile) gloves recommended when handling material to minimize exposure. Long sleeve shirts, chemically protective aprons and chemically protective boots are recommended for contact exposure or spill clean-up. Do not wear watches, rings or similar apparel that could entrap the material next to the skin.

OTHER (SAFETY SHOWERS, EYE WASH STATIONS, ETC.): Water should be available for flushing and washing when exposure exists. Launder soiled clothes. Discard shoes or other leather articles saturated with the material.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Amber liquid

ODOR: Mild odor

BOILING POINT: N/D

SPECIFIC GRAVITY (water=1): 0.8850 - 0.8950

VAPOR PRESSURE: <1 mm Hg 68° F

VAPOR DENSITY (air=1): N/D

SOLUBLE IN WATER: Insoluble

EVAPORATION RATE (ether=1): <1

Section 10 - STABILITY AND REACTIVITY

pH: N/D

STABILITY:

STABLE _X_ (At room temperature and pressure. See handling and storage section)
UNSTABLE

INCOMPATIBILITY -

CONDITIONS TO AVOID: See handling and storage section.

MATERIALS TO AVOID: Acids, oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Smoke, carbon monoxide, aldehydes, hydrogen sulfide and alkyl mercaptans may be released. Under combustion conditions, oxides of the following elements will be formed: Magnesium, calcium, nitrogen, sulfur, carbon.

HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 - TOXICOLOGY INFORMATION

Note: Country*ENERGY* has not conducted specific toxicity tests on this product.

Section 12 - ECOLOGICAL INFORMATION

Note: Country*ENERGY* has not conducted specific ecological tests on this product.

Section 13 - DISPOSAL CONSIDERATION

WASTE DISPOSAL PROCEDURES: Place contaminated materials in a disposable container and dispose of in accordance with Local, State and Federal environmental regulations.

Section 14 - TRANSPORTATION

DOT PROPER SHIPPING NAME: N/A

DOT HAZARD CLASS: N/A

DOT IDENTIFICATION NUMBER: N/A

DOT EMER. RESPONSE GUIDE NO.: N/A

Section 15 - REGULATORY INFORMATION

This product (does/not) contain toxic chemicals subject to the reporting requirements of SARA Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

CAS Number	Chemical Name	Percent by Weight

SARA SECTION 311-312 HAZARD CATEGORIES (40 CFR 370.2):

FIRE: No **SUDDEN RELEASE OF PRESSURE:** No **REACTIVE:** No **ACUTE:** No **CHRONIC:** No

Section 16 - OTHER INFORMATION

Prepared By: Hue Lam

DATE: May 5, 1999

Approved By: Marc Siebert

Supersedes: N/A

Title: Manager, Quality System

Reason for Issue: Country Energy Marketer

SUPER-TEK STP High Performance Products 25-44 Borough Place • Woodside, NY 11377 • 718.278.7900 • email:info@super-tek.com

Poly-Grout Plus Sanded Grout MSDS

(Scroll down for UNSANDED)

SECTION I – PRODUCT IDENTIFICATION

Super-Tek Products, Inc.
25-44 Borough Place, Woodside, NY 11377
Telephone #: 718-278-7900
Emergency Phone #: 718-278-7900
Generic ID: Cement Based Grout for Joints 1/8" or Greater
Product Identity: Versa-Tile Sanded Grout
Date Prepared: 1/1/02

SECTION II – INGREDIENTS & HAZARDOUS COMPONENTS

Ingredient Name	CAS Number	Percent	Exposure Limits
Crystalline Silica	14808-60-7	45-52	0.05mg/m3 (ACGIH)
Dolomite	6389-88-1	2-7	10mg/m3 (ACGIH)
Portland Cement	65997-15-1	35-42	10mg/m3 (ACGIH)
Latex Polymer	N/A	2.50-3	N/A

*** Other Non-Hazardous Ingredients considered a Trade Secret**

OSHA PEL: Exposure to airborne crystalline silica shall not exceed an 8-hour time-weighted average (TWA) limit as stated in 29 CFR 1910.1000 Table Z-3, Air Contaminants, specifically: 10 mg/m3 %SiO2+2

SECTION III – PHYSICAL DATA

Initial Boiling Point: N/A.
Vapor Pressure: N/A.
Vapor Density (Air=1.0): N/A.
Specific Gravity: 2.2-2.3.
Percent Volatiles: 0.00%

SECTION IV – FIRE AND EXPLOSION DATA

Flash Point: N/A.
Explosive Limit (Product): N/A.
Extinguishing Media: None to avoid.
SPECIAL FIRE FIGHTING PROCEDURES: None.
UNUSUAL FIRE & EXPLOSION HAZARDS: None.

SECTION V – HEALTH HAZARD DATA

Eye Contact: Crystalline silica(quartz) may cause abrasion of the cornea.
Skin Contact: Wet compound can dry the skin and cause caustic burns.
Ingestion: No adverse effects expected for incidental ingestion.
Chronic Effects: The adverse health effects - silicosis, lung cancer, scleroderma, tuberculosis, and nephrotoxicity -- are chronic effects.

FIRST AID:
Inhalation: No first aid is necessary since the adverse health effects associated with exposure to crystalline silica (quartz) result from chronic exposures. If there is a gross inhalation of crystalline silica (quartz), remove the person immediately to fresh air, give artificial respiration as needed, seek medical attention as needed.
Eye Contact: Wash eyes immediately and repeatedly with water and seek prompt medical attention.
Skin Contact: Wash exposed skin with soap and water immediately.
Ingestion: If ingested, seek immediate medical attention. Drink water.

IARC - The International Agency for Research on Cancer ("IARC") concluded that there was "sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite from occupational sources." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group l)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances. For further information on the IARC evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 68, "Silica, Some Silicates..." (1997).

NTP - The National Toxicology Program, in its Ninth Annual Report on Carcinogens, May 15,2000, classified that "respirable crystalline silica, primarily quartz dust occurring in industrial and occupational settings, as known to be a human carcinogen."

SECTION VI – REACTIVITY DATA

Stability: Stable.
Incompatibility (Materials to Avoid): Contact with powerful oxidizing agents such as fluorine, chlorine, trifluoride, oxygen difluoride, may cause fires.
Hazardous Decomposition: None.
Hazardous Polymerization: None
Conditions to Avoid: Avoid contact with water or moisture during storage.

SECTION VII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Use Appropriate Respiratory Protection. Limit Dust with Water Spray or Vacuum. Provide Ventilation. Refer to State and Local Regulations for handling Solid Waste.

SECTION VIII – PROTECTIVE EQUIPMENT

Ventilation: Open all available windows and entrances to insure good ventilation.
Respirator Protection: NIOSH approved respirator.
Protective Gloves: Leather or rubber gloves for skin and hands.
Eye Protection: Wear glasses or protective goggles to avoid splashes.
WASH HANDS THORUGHLY WITH SOAP AND WATER.

SECTION IX – SPECIAL PRECAUTIONS

Protect from freezing. Use only in applications as stated on the label. Do not take internally. Close container after each use. Avoid skin and eye contact.

Ventilation with fresh air, including open doors and windows should be observed during any flooring installation. Operate HVAC systems at 100% fresh air intake before, during and after installation to eliminate lingering odors or particulate matter.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with company or not. Recipients are advised to confirm in advance of need that the information is current, applicable and suitable to their circumstances.

KEEP OUT OF REACH OF CHILDREN

Poly-Grout Plus Unsanded Grout MSDS

SECTION I – PRODUCT IDENTIFICATION

Super-Tek Products, Inc.
25-44 Borough Place, Woodside, NY 11377
Telephone #: 718-278-7900
Emergency Phone #: 718-278-7900
Generic ID: Cement Based Grout for Joints 1/8" or Greater
Product Identity: Versa-Tile Sanded Grout
Date Prepared: 1/1/02

SECTION II – INGREDIENTS & HAZARDOUS COMPONENTS

Ingredient Name	CAS Number	Percent	Exposure Limits
Dolomite	16389-88-1	50-55	10mg/m3 (ACGIH)
Portland Cement	65997-15-1	40-46	10mg/m3 (ACGIH)
Lime	1305-62-0	0-1	5mg/m3 (ACGIH)
Lime	N/A	2.50-3	N/A

*** Other Non-Hazardous Ingredients considered a Trade Secret**

OSHA PEL: Exposure to airborne crystalline silica shall not exceed an 8-hour time-weighted average (TWA) limit as stated in 29 CFR 1910.1000 Table Z-3, Air Contaminants, specifically: 10 mg/m3 %SiO2+2

SECTION III – PHYSICAL DATA

Initial Boiling Point: N/A.
Vapor Pressure: N/A.
Vapor Density (Air=1.0): N/A.
Specific Gravity: 2.2-2.3.
Percent Volatiles: 0.00%

SECTION IV – FIRE AND EXPLOSION DATA

Flash Point: N/A.
Explosive Limit (Product): N/A.
Extinguishing Media: None to avoid.
SPECIAL FIRE FIGHTING PROCEDURES: None.
UNUSUAL FIRE & EXPLOSION HAZARDS: None.

SECTION V – HEALTH HAZARD DATA

Eye Contact: Crystalline silica(quartz) may cause abrasion of the cornea.
Skin Contact: Wet compound can dry the skin and cause caustic burns.
Ingestion: No adverse effects expected for incidental ingestion.
Chronic Effects: The adverse health effects - silicosis, lung cancer, scleroderma, tuberculosis, and nephrotoxicity -- are chronic effects.

FIRST AID:
Inhalation: No first aid is necessary since the adverse health effects associated with exposure to crystalline silica (quartz) result from chronic exposures. If there is a gross inhalation of crystalline silica (quartz), remove the person immediately to fresh air, give artificial respiration as needed, seek medical attention as needed.
Eye Contact: Wash eyes immediately and repeatedly with water and seek prompt medical attention.
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Ingestion: If ingested, seek immediate medical attention. Drink water.

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SECTION VI – REACTIVITY DATA

Stability: Stable.
Incompatibility (Materials to Avoid): Contact with powerful oxidizing agents such as fluorine, chlorine, trifluoride, oxygen difluoride, may cause fires.
Hazardous Decomposition: None.
Hazardous Polymerization: None
Conditions to Avoid: Avoid contact with water or moisture during storage.

SECTION VII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Use Appropriate Respiratory Protection. Limit Dust with Water Spray or Vacuum. Provide Ventilation. Refer to State and Local Regulations for handling Solid Waste.

SECTION VIII – PROTECTIVE EQUIPMENT

Ventilation: Open all available windows and entrances to insure good ventilation.
Respirator Protection: NIOSH approved respirator.
Protective Gloves: Leather or rubber gloves for skin and hands.
Eye Protection: Wear glasses or protective goggles to avoid splashes.
WASH HANDS THOROUGHLY WITH SOAP AND WATER.

SECTION IX – SPECIAL PRECAUTIONS

Protect from freezing. Use only in applications as stated on the label. Do not take internally. Close container after each use. Avoid skin and eye contact.

Ventilation with fresh air, including open doors and windows should be observed during any flooring installation. Operate HVAC systems at 100% fresh air intake before, during and after installation to eliminate lingering odors or particulate matter.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with company or not. Recipients are advised to confirm in advance of need that the information is current, applicable and suitable to their circumstances.

KEEP OUT OF REACH OF CHILDREN

rev. 12/2003

MATERIAL SAFETY DATA SHEET

TILE LAB GROUT AND TILE SEALER

HMIS

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	H

1. Product And Company Identification

Supplier
CUSTOM BUILDING PRODUCTS
10400 Pioneer Blvd., Unit #3
Santa Fe Springs, CA 90670 UNITED STATES

Company Contact: GEORGE MARCINA
Telephone Number: (562) 968-2980 Ext 103
FAX Number: (562) 903-2697
E-Mail: georgem@cbpmail.net
Web Site: www.custombuildingproducts.com

Manufacturer
CUSTOM BUILDING PRODUCTS
10400 Pioneer Blvd., Unit #3
Santa Fe Springs, CA 90670 UNITED STATES

Company Contact: GEORGE MARCINA
Telephone Number: (562) 968-2980 Ext 103
FAX Number: (562) 903-2697
E-Mail: georgem@cbpmail.net
Web Site: www.custombuildingproducts.com

Supplier Emergency Contacts & Phone Number
GEORGE MARCINA: (562) 968-2980

Manufacturer Emergency Contacts & Phone Number
GEORGE MARCINA: (562) 968-2980

Issue Date: 03/17/2006

Product Name: TILE LAB GROUT AND TILE SEALER
CAS Number: Not Established
Chemical Formula: MIXTURE
MSDS Number: 577
Product Code: 3054

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
PERFLUOROALKYLMETHACRYLIC COPOLYMER	Not establish		1 - 5

THIS PRODUCT DOES NOT CONTAIN HAZARDOUS CHEMICALS AS DEFINED BY 29 CFR 1910.1200.

3. Hazards Identification

Primary Routes(s) Of Entry
EYES, SKIN AND NOSE.

Eye Hazards
MAY CAUSE IRRITATION, DISCOMFORT, BLURRED VISION.

Skin Hazards
MAY CAUSE IRRITATION, DISCOMFORT OR RASH.

Ingestion Hazards
SWALLOWING SUBSTANTIAL AMOUNTS MAY CAUSE HARM.

Inhalation Hazards
INHALATION OF SPRAY OR MIST MAY CAUSE IRRITATION OF THROAT OR LUNGS. INHALATION OF LARGE AMOUNTS MAY CAUSE PULMONARY EDEMA. SYMPTOMS, SEVERE SHORTNESS OF BREATH MAY BE DELAYED. GET IMMEDIATE MEDICAL ATTENTION. OVER EXPOSURE MAYBE FATAL

3. Hazards Identification - Continued

Conditions Aggravated By Exposure
MAY ENHANCE ALLERGIC CONDITIONS.

Conditions Aggravated By Overexposure
PRE EXISTING SKIN CONDITIONS.

4. First Aid Measures

Eye
FLUSH WITH WATER FOR 15 MINUTES. OBTAIN IMMEDIATE MEDICAL ATTENTION.

Skin
FLUSH WITH WATER. WASH CONTAMINATED CLOTHING BEFORE REUSE.

Ingestion
DO NOT INDUCE VOMITTING. IF CONSCIOUS GIVE 2 GLASSES OF WATER OBTAIN MEDICAL ATTENTION. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIUOS PERSON.

Inhalation
REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NECESSARY. IF BREATHING IS DOIFFICULT GIVE OXYGEN. OBTAIN MEDICAL ATTENTION.

5. Fire Fighting Measures

Flash Point: NONE °F
Lower Explosive Limit: N/A
Upper Explosive Limit: N/A

Fire And Explosion Hazards
NOT APPLICABLE.

Extinguishing Media
PRODUCT IS NON-COMBUSTIBLE.

Fire Fighting Instructions
SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING SHOULD BE WORN IN FIGHTING FIRES INVOLVING CHEMICALS.

6. Accidental Release Measures

IN CASE MATERIAL IS RELEASED OR SPILLED, USE ABSORBENT MATERIAL TO COLLECT AND CONTAIN FOR SALVAGE OR DISPOSAL.

7. Handling And Storage

Handling And Storage Precautions
STORE IN COOL PLACE.

Work/Hygienic Practices
GOOD PRACTICES REQUIRE THAT GROSS AMOUNT OF ANY CHEMICAL BE REMOVED FROM SENSITIVE SKIN AS SOON AS POSSIBLE.
OBSERVE GOOD HOUSEKEEPING PRACTICES.

8. Exposure Controls/Personal Protection

Eye/Face Protection
USE SAFETY GOGGLES.

8. Exposure Controls/Personal Protection - Continued

Skin Protection
USE PROTECTIVE GLOVES AS A MINIMUM AND WASH PROMPTLY.

Respiratory Protection
LOCAL EXHAUST VENTILATION IS USUALLY ADEQUATE.

Other/General Protection
LOCAL EXHAUST IS RECOMMENDED.

9. Physical And Chemical Properties

Appearance
PALE LIQUID.

Chemical Type: Mixture
Physical State: Liquid
Boiling Point: 212 °F 100 °C
Specific Gravity: 1.0
Percent Volatiles: 97.5
Vapor Density: HEAVIER THAN AIR.
pH Factor: NEUTRAL
Solubility: FULLY MISCIBLE
Evaporation Rate: SLOWER THAN ETHER.

10. Stability And Reactivity

Stability: STABLE
Hazardous Polymerization: WILL NOT OCCUR.

Conditions To Avoid (Stability)
EXCESSIVE HEAT.

11. Toxicological Information

No Data Available...

12. Ecological Information

No Data Available...

13. Disposal Considerations

DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE, FEDERAL REGULATIONS, CONCERNING HEALTH AND POLLUTION.

RCRA Information
NOT RCRA WASTE

14. Transport Information

No Data Available...

15. Regulatory Information

No Data Available...

16. Other Information

HMIS Rating
Health: 1
Fire: 0

16. Other Information - Continued

HMIS Rating - Continued
Reactivity: 0
Personal Protection: H

Revision/Preparer Information
MSDS Preparer: GEORGE MARCINA
MSDS Preparer Phone Number: 562/968-2980 EXT 103
This MSDS Supercedes A Previous MSDS Dated: 03/16/2006

Disclaimer

QUIKRETE
CEMENT & CONCRETE PRODUCTS™

NON- SHRINK GROUTS

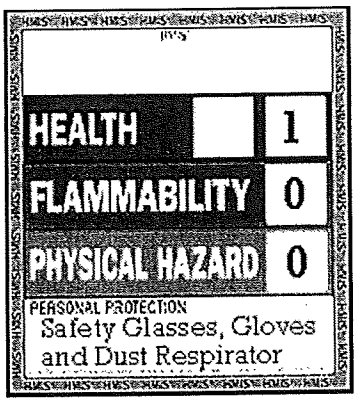
MATERIAL SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30329

Emergency Telephone Number
(770) 216-9580

Information Telephone Number
(770) 216-9580



MSDS D1
Revision: Feb-07

QUIKRETE® Product Name	Product #
NON-SHRINK PRECISION GROUT	1585-00
NON-SHRINK GENERAL PURPOSE GROUT	1585-01

PRODUCT USE: PORTLAND CEMENT-BASED GROUTING MATERIALS FOR COLUMNS, MACHINERY BASES AND ANY APPLICATION WHERE VOLUME STABILITY IS IMPORTANT

SECTION II - HAZARD IDENTIFICATION

Route(s) of Entry: Inhalation, Skin, Ingestion
Acute Exposure: Product becomes alkaline when exposed to moisture. Exposure can dry the skin, cause alkali burns and affect the mucous membranes. Dust can irritate the eyes and upper respiratory system. Toxic effects noted in animals include, for acute exposures, alveolar damage with pulmonary edema.
Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis.
Carcinogenicity: Since Portland cement and blended cements are manufactured from raw materials mined from the earth (limestone, marl, sand, shale, etc.) and process heat is provided by burning fossil fuels, trace, but detectable, amounts of naturally occurring, and possibly harmful, elements may be found during chemical analysis. Under ASTM standards, Portland cement may contain 0.75 % insoluble residue. A fraction of these residues may be free crystalline silica. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs and possibly cancer. There is evidence that exposure to respirable silica or the disease silicosis is associated with an increased incidence of Scleroderma, tuberculosis and kidney disorders.

Carcinogenicity Listings: NTP: Known carcinogen

OSHA: Not listed as a carcinogen
IARC Monographs: Group 1 Carcinogen
California Proposition 65: Known carcinogen

NTP: The National Toxicology Program, in its "Ninth Report on Carcinogens" (released May 15, 2000) concluded that "Respirable crystalline silica (RCS), primarily quartz dusts occurring in industrial and occupational settings, is *known to be a human carcinogen*, based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to RCS and increased lung cancer rates in workers exposed to crystalline silica dust (reviewed in IAC, 1997; Brown *et al.*, 1997; Hind *et al.*, 1997)

IARC: The International Agency for Research on Cancer ("IARC") concluded that there was "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz or cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans* (Group 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances or studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of carcinogenic Risks to Humans, Volume 68, "Silica, Some Silicates." (1997)

Signs and Symptoms of Exposure: Symptoms of excessive exposure to the dust include shortness of breath and reduced pulmonary function. Excessive exposure to skin and eyes especially when mixed with water can cause caustic burns as severe as third degree.

Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure. Exposure to crystalline silica or the disease silicosis is associated with increased incidence of scleroderma, Tuberculosis and possibly increased incidence of kidney lesions.
Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis. (May contain trace (<0.05 %) amounts of chromium salts or compounds including hexavalent chromium, or other metals found to be hazardous or toxic in some chemical forms. These metals are mostly present as trace substitutions within the principal minerals)
Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure.

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	PEL (OSHA) TLV (ACGIH)
	mg/M^3	mg/M^3

Silica Sand, crystalline	14808-60-7	$\frac{10}{\%SiO_2+2}$	0.05 (respirable)
Portland Cement	65997-15-1	5	5
May Contain one or more of the following ingredients:			
Amorphous Silica	07631-86-9	$\frac{80\ mg/M^3}{\%\ SiO_2}$	10
Calcium Sulfate	10101-41-4 or 13397-24-5	5	5
Lime	01305-62-0	5	5
Fly Ash	68131-74-8	5	5
Calcium Aluminate Cement	65997-16-2	5	5
Clay	01332-58-7	5	5
Pulverized Limestone	01317-65-3	5	5

Other Limits: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration=0.05 mg/M^3 (respirable free silica) as determined by a full-shift sample up to 10-hour working day, 40-hour work week. See NIOSH Criteria for a Recommended Standard Occupational Exposure to Crystalline Silica

SECTION IV – First Aid Measures

Eyes: Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.
Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.
Inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalations of large amounts of Portland cement require immediate medical attention.
Ingestion: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flammability: Noncombustible and not explosive.
Auto-ignition Temperature: Not Applicable
Flash Points: Not Applicable

SECTION VI – ACCIDENTAL RELEASE MEASURES

If spilled, use dustless methods (vacuum) and place into covered container for disposal (if not contaminated or wet). Use adequate ventilation to keep exposure to airborne contaminants below the exposure limit.

QUIKRETE
CEMENT & CONCRETE PRODUCTS™

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

Do not allow water to contact the product until time of use. DO NOT BREATHE DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator and tight fitting goggles is recommended.

SECTION VIII – EXPOSURE CONTROL MEASURES

Engineering Controls: Local exhaust can be used, if necessary, to control airborne dust levels.

Personal Protection: The use of barrier creams or impervious gloves, boots and clothing to protect the skin from contact is recommended. Following work, workers should shower with soap and water. Precautions must be observed because burns occur with little warning -- little heat is sensed.

WARN EMPLOYEES AND/OR CUSTOMERS OF THE HAZARDS AND REQUIRED OSHA PRECAUTIONS ASSOCIATED WITH THE USE OF THIS PRODUCT.

Exposure Limits: Consult local authorities for acceptable exposure limits

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: Gray to gray-brown colored powder.

Specific Gravity:	2.6 to 3.15	**Melting Point:**	>2700°F
Boiling Point:	>2700°F	**Vapor Pressure:**	Not Applicable
Vapor Density:	Not Applicable	**Evaporation Rate:**	Not Applicable
Solubility in Water:	Slight	**Odor:**	Not Applicable

SECTION X - REACTIVITY DATA

Stability: Stable.
Incompatibility (Materials to Avoid): Material when mixed with water will react with Aluminum and other alkali and alkaline earth elements liberating hydrogen gas.
Hazardous Decomposition or By-products: None
Hazardous Polymerization: Will Not Occur.
Condition to Avoid: Keep dry until used to preserve product utility.

SECTION XI – TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, Ingestion
Toxicity to Animals:
LD50: Not Available
LC50: Not Available
Chronic Effects on Humans: Conditions aggravated by exposure include eye disease, skin disorders and Chronic Respiratory conditions.
Special Remarks on Toxicity: Not Available

SECTION XII – ECOLOGICAL INFORMATION

Ecotoxicity: Not Available
BOD5 and COD: Not Available
Products of Biodegradation: Not available
Toxicity of the Products of Biodegradation: Not available
Special Remarks on the Products of Biodegradation: Not available

SECTION XIII – DISPOSAL CONSIDERATIONS

Waste Disposal Method: The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302).

SECTION XIV – TRANSPORT INFORMATION

DOT/UN Shipping Name: Non-regulated
DOT Hazard Class: Non-regulated
Shipping Name: Non-regulated
Non-Hazardous under U.S. DOT and TDG Regulations

SECTION XV – OTHER REGULATORY INFORMATION

US OSHA 29CFR 1910.1200: Considered hazardous under this regulation and should be included in the employers hazard communication program
SARA (Title III) Sections 311 & 312: Qualifies as a hazardous substance with delayed health effects
SARA (Title III) Section 313: Not subject to reporting requirements
TSCA (May 1997): All components are on the TSCA inventory list
Federal Hazardous Substances Act: Is a hazardous substance subject to statues promulgated under the subject act
Canadian Environmental Protection Act: Not listed
WHMIS Classification: Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations (Class D2A, E- Corrosive Material) and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This product has been classified according to the hazard criteria of the Controlled Products Regulation (CPR). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

SECTION XVI – OTHER INFORMATION

HMIS-III: Health – 0 = No significant health risk
1 = Irritation or minor reversible injury possible
2 = Temporary or minor injury possible
3 = Major injury possible unless prompt action is taken

	4 = Life threatening, major or permanent damage possible
Flammability-	0 = Material will not burn
	1 = Material must be preheated before ignition will occur
	2 = Material must be exposed to high temperatures before ignition
	3 = Material capable of ignition under normal temperatures
	4 = Flammable gases or very volatile liquids; may ignite spontaneously
Physical Hazard-	0 = Material is normally stable, even under fire conditions
	1 = Material normally stable but may become unstable at high temps
	2 = Materials that are unstable and may undergo react at room temp
	3 = Materials that may form explosive mixtures with water
	4 = Materials that are readily capable of explosive water reaction

Abbreviations:

ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
CFR	Code of Federal Regulations
CPR	Controlled Products Regulations (Canada)
DOT	Department of Transportation
IARC	International Agency for Research
MSHA	Mine Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicity Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TWA	Time-weighted Average
WHMIS	Workplace Hazardous Material Information System

Revision #07-01, supersedes all previous revisions.
Created: 10/25/2006
Last Updated: February 6, 2007

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

National Gypsum

Material Safety Data Sheet

Gold Bond® BRAND Gypsum Board Products

MSDS No: **GB-1501**

Date: July 1, 2009
Supersedes Date: May 22, 2006

1. PRODUCT AND COMPANY INFORMATION

Manufacturer Information:
National Gypsum Company
2001 Rexford Road
Charlotte, NC 28211

For Emergency Product Information Call:
Director Quality Services
(704) 551-5820 - 24 Hour Emergency Response
Website: www.nationalgypsum.com

Product Name	Product Name
½" Gypsum Board – Square Edge	½" High Strength Ceiling Board
½" Gypsum Board – Tapered Edge	¼" High Flex® Gypsum Board
¼" Gypsum Board – Tapered Edge	½" Sta-Smooth® Gypsum Board
3/8" Gypsum Board – Tapered Edge	½" FS C Sta-Smooth® Gypsum Board
½" FS C Gypsum Board	5/8" FS Sta-Smooth® Gypsum Board
5/8" Fire-Shield® Gypsum Board	½" Durabase® Gypsum Board
5/8" Fire-Shield® C Gypsum Board	5/16" Durabase® Gypsum Board
½" Foil Back Gypsum Board	
5/8" FS Foil Back Gypsum Board	
Gypsum Board Reclaim	

Use: Gypsum Board products are designed for specific applications that require properties such as: fire resistance, moisture resistance, abrasion resistance, sag resistance and other properties required for applications in walls and ceiling assemblies.

Generic Descriptions: Article Composite. Fire resistant and/or moisture resistant gypsum core encased in paper on front and back sides.

2. HAZARDS IDENTIFICATION

Appearance and Odor: A gypsum core wrapped with paper. Surface finish will vary with product. No odor.

Contains no asbestos. HMIS Hazard Class No. 1, 0, 0.

Emergency Overview

Gold Bond® BRAND Board Products do not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as sawing, sanding or machining which result in the generation of airborne particulate. This product contains quartz (crystalline silica) as a naturally occurring contaminant. It is recommended that a NIOSH approved particulate respirator be worn whenever working with this product results in airborne dust exposure exceeding the prescribed limits.
(See Section 11 - Toxicological Information)

2. HAZARDS IDENTIFICATION (CONTINUED)

OSHA Regulatory Status

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Potential Health Effects

Primary Routes of Entry: Inhalation, Dermal contact

Target Organs: Respiratory system, skin, eyes.

Inhalation: Acute exposure to airborne dust concentrations in excess of the PEL/TLV may result in coughing, dyspnea, wheezing, general irritation of the nose, throat, and upper respiratory tract, and impaired pulmonary function. Chronic exposures may result in lung disease (silicosis and/or lung cancer). (See Section 11 - Toxicological Information)

Exposures to respirable crystalline silica have not been documented during normal use of this product. However, good housekeeping practices and industrial hygiene monitoring is recommended when the potential for significant exposure exists.

Skin Contact: Continued and prolonged contact may result in dry skin. Contact with dust or glass fibers may produce itching, rash and/or redness. Repeated or prolonged exposure may result in dermatitis.

Eye Contact: Direct contact may cause mechanical irritation.

Ingestion: No known adverse effects. May result in obstruction or temporary irritation of the digestive tract.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-Number	Weight Percent
Calcium Sulfate Dihydrate (Gypsum)	10101-41-4	85-95
Crystalline Silica (Quartz)	14808-60-7	<5
Cellulose (Paper Fiber)	9004-34-6	5-15
And may contain:		
Fiberglas, synthetic, vitreous, continuous	65997-17-3	<1%

4. FIRST AID MEASURES

- **Inhalation:** Remove exposed individual to fresh air immediately. If breathing difficulty persists, seek medical attention.
- **Skin:** Flush and wash skin with soap and water. Utilize lotions to alleviate dryness if present. Seek medical attention if irritation persists.
- **Eye:** Immediately flush eyes with water for 15 minutes. Remove contact lenses (if applicable). Seek medical attention if irritation persists.
- **Ingestion:** Gypsum is non-hazardous and no harmful effects are expected upon ingestion of small amounts. Larger amounts may cause abdominal discomfort or possible obstruction of the digestive tract. Seek medical attention if problems persist.

5. FIRE FIGHTING MEASURES

Flammable Properties
- Not flammable or combustible
- NFPA Hazard Class No: 1/0/0

Extinguishing media
- Dry chemical, foam, water, fog or spray

Protection of firefighters
- Standard protective equipment and precautions

Fire and Explosion Hazards
- None

Hazardous Combustion Products
- None
- Above 1450°C, material can decompose and release sulfur dioxide (SO_2) and oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Not applicable, as product is an article composite.

General recommendations:

- Wear appropriate Personal Protective Equipment. (See Section 8)
- Maintain proper ventilation.
- Pick-up larger pieces to avoid a tripping hazard. Return large pieces of damaged/scraped material for recycling. Sweep or vacuum remaining material into a waste container for disposal. Use a light water spray to minimize dust generation.
- Waste material is not a hazardous waste. Dispose of in accordance with applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

- Avoid contact with eyes, skin and clothing.
- Wear recommended personal protective equipment when handling. (See Section 8)
- Avoid breathing dust.
- Minimize generation of dust.
- Utilize proper lifting techniques when moving product and employ mechanical/ergonomic assistance when possible (i.e. move with forklifts, hold in place with lifts) to minimize the risk of back injury.
- Store material in a cool, dry, ventilated area.
- Store panels flat to minimize damage and warping.
- Do not stack panels too high when storing to minimize the risk of falling.

8. *EXPOSURE CONTROLS/PERSONAL PROTECTION*

Exposure Guidelines

	Exposure Limits	
Component	**OSHA PEL** (mg/m3)	**ACGIH TLV** (mg/m3)
Calcium Sulfate Dihydrate (Gypsum)	15 (T) 5 (R)	10 (T)
Crystalline Silica (Quartz)	0.1 (R)	0.025 (R)
Cellulose (Paper Fiber)	15 (T) 5 (R)	10 (T)
Fiberglas, synthetic, vitreous, continuous	15 (T) 5 (R)	1 f/cc (R)

T- Total Dust
R- Respirable Dust

Engineering Controls

- Work/Hygiene Practices: The score and snap method of cutting is recommended. Sawing, drilling or machining will produce dust.
- Ventilation: Provide local and general exhaust ventilation to maintain a dust level below the PEL/TLV.
- Utilize wet methods, when appropriate, to reduce generation of dust.

Personal Protective Equipment

- Respiratory Protection: A NIOSH approved particulate respirator is recommended in poorly ventilated areas or if the PEL/TLV is exceeded. OSHA's 29 CFR 1910.134 (Respiratory Protection Standard) must be followed whenever work conditions require respirator use.
- Eye Protection: Safety glasses or goggles.
- Skin: Gloves, protective clothing and/or barrier creams may be utilized if conditions warrant.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Paper faced gypsum boards with white/gray core
Odor: None
Physical State: Solid
Ph: ~7
Solubility (H2O): 2.1 g/L @ 20°C
Boiling, Freezing, Melting Point: Not Applicable
Decomposition Temperature: 1450°C
Vapor pressure: Not Applicable
Vapor density: Not Applicable
Volatile organic compounds (VOC) content: None

Flammability: Not Applicable
Flash Point: Not Applicable
Upper/Lower explosive limits: Not applicable
Auto-ignition temperature: Not Applicable
Partition coefficient: n-octanol/water: Not applicable
Evaporation rate: Not Applicable
Molecular weight: 172.2 grams
Molecular formula: $CaSO_4.2H_2O$
Specific Gravity: 2.31 g/cc
Bulk Density: ~55 lb/ft3

10. STABILITY AND REACTIVITY

Chemical stability: Stable in dry environments.
Conditions to avoid: Contact with strong acids may result in generation of carbon dioxide.
Incompatibility: None
Hazardous decomposition: Above 1450°C gypsum will decompose to calcium oxide (CaO), with releases of sulfur dioxide (SO_2) and various oxides of carbon.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Data presented is for the major component of this product: Gypsum (calcium sulfate dihydrate)

Human Data
There is no information on toxicokinetics, metabolism and distribution.

There have been reports of irritation to mucus membranes of the eyes and respiratory tract upon acute exposure to dusts in excess of the recommended limits.

Chronic exposure to crystalline silica (a naturally occurring contaminant in gypsum) in the respirable size has been shown to cause silicosis, a debilitating lung disease. In addition, the International Agency for Research on Cancer (IARC) classifies crystalline silica inhaled in the form of quartz or cristobalite from occupational sources as carcinogenic to humans, Group 1. The National Toxicology Program (NTP) classifies respirable crystalline silica as a substance which may be reasonably anticipated to be a carcinogen. OSHA does not regulate crystalline silica as a human carcinogen. Industrial hygiene monitoring to date has not identified any detectable respirable crystalline silica in dust sampling conducted during gypsum panel installation utilizing recommended procedures.

Animal Data
The acute oral toxicity study [OECD TG 420, Fixed dose procedure] of calcium sulfate dihydrate showed that this chemical did not cause any changes even at 2,000 mg/kg b.w. Therefore, the oral LD_{50} value was more than 2,000-mg/kg b.w. for female rats (Sprague-Dawley).

Calcium sulfate, dihydrate was not irritating to the skin of rabbits at 1, 24, 48 and 72 hours after removal of test patches [OECD TG 404]. There is no indication of skin sensitization in guinea pigs [OECD TG 406].

Invivo and *Invitro* studies for mutagenicity were negative.

Reproduction/Developmental Toxicity Screening Tests were negative.

12. ECOLOGICAL INFORMATION

This product does not present an ecological hazard to the environment.

Ecotoxicological Information
Toxicity studies performed with fish, aquatic invertebrates and aquatic plants showed no toxic effect.

Environmental Fate
Gypsum is a naturally occurring mineral. Biodegradation and/or bioaccumulation potential is not applicable.

13. DISPOSAL CONSIDERATIONS

- Dispose of according to Local, State, Federal, and Provincial Environmental Regulations.
- Recycle if possible.

14. TRANSPORT INFORMATION

- This product is not a DOT hazardous material
- Shipping Name: Same as product name
- ICAO/IATA/IMO: Not applicable

15. REGULATORY INFORMATION

All ingredients are included on the TSCA inventory.

Federal Regulations

SARA Title III: Not listed under Sections 302, 304, and 313
CERCLA: Not listed
RCRA: Not listed
OSHA: Dust and potential respirable crystalline silica generated during product use may be hazardous.

State Regulations
California Prop 65: Respirable crystalline silica is known to the state of California to cause cancer. Industrial hygiene monitoring during recommended use of this product failed to identify any respirable crystalline silica.

Canada WHMIS
All components of this product are included in the Canadian Domestic Substances List (DSL).
Crystalline silica: WHMIS Classification D2A

16. OTHER INFORMATION

MSDS Revision Summary
Effective Date Change: 5/22/06 Supersedes: 1/26/04
Format Changes: ANSI Z400.1-2004

16. OTHER INFORMATION (CONTINUED)

Key/Legend

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Services Number
CFR	Code of Federal Regulations
DOT	Department of Transportation
EPA	Environmental Protection Agency
HEPA	High Efficiency Particulate Air
HMIS	Hazardous Material Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
NIOSH	National Institute for Occupational Safety and Health
NFPA	National Fire Protection Association
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPE	Personal Protective Equipment
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This material safety data sheet was prepared to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and with the Workplace Hazardous Materials Information System (WHMIS).

Disclaimer of Liability:
As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of the material. Information contained herein is believed to be true and accurate, but all statements or suggestions are made without any warranty, express or implied, regarding accuracy of the information, the hazards connected with the use of the material, or the results to be obtained for the use thereof.

National Gypsum COMPANY

Material Safety Data Sheet

Ready Mix Joint Compounds

MSDS No: **GB-5002**

Date: May 22, 2006

Supersedes Date: November 23, 2004

1. PRODUCT AND COMPANY INFORMATION

Manufacturer Information:
National Gypsum Company
2001 Rexford Road
Charlotte, NC 28211

For Emergency Product Information Call:
Director Quality Services
(704) 551-5820 - 24 Hour Emergency Response
Website: www.nationalgypsum.com

Product Name:

Easy Finish Light Weight
ProForm Patch Kit
Easy Finish Topping
Easy Finish All Purpose
Acabado Facil Multi USO
ProForm All Purpose Export EX 70
ProForm Multi-Use
ProForm Taping
ProForm Blue Lite
ProForm Texture Grade
ProForm All Purpose
ProForm All Purpose Machine Grade
ProForm Lite
ProForm Topping
ProForm Level 5
ProForm Ultra
Triple-T® Joint Compound
ProForm XP
Advantage
The Total Package™

Use: All-purpose drying type compounds for finishing wallboard products. Sta-Smooth products are setting type compounds available in specific set times.

Generic Descriptions: Pre-mixed compounds that are off white in color, and dry to a white finish.

2. HAZARDS IDENTIFICATION

Appearance and Odor: A white to gray paste with mild latex odor.

Contains no asbestos. HMIS Hazard Class No. 1, 0, 0.

Emergency Overview

ProForm® Ready Mix Joint Compound Products do not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as sanding or machining which result in the generation of airborne particulate. A slight odor from the latex may be evident upon opening the container, which will dissipate quickly. This product contains quartz (crystalline silica) as a naturally occurring contaminant. It is recommended that a NIOSH approved particulate respirator be worn whenever working with this product results in airborne dust exposure exceeding the prescribed limits.
(See Section 11 - Toxicological Information)

OSHA Regulatory Status

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

2. HAZARDS IDENTIFICATION (CONTINUED)

Potential Health Effects

Primary Routes of Entry: Inhalation, Dermal contact

Target Organs: Respiratory system, skin, eyes.

Inhalation: Acute exposure to airborne dust concentrations in excess of the PEL/TLV may result in coughing, dyspnea, wheezing, general irritation of the nose, throat, and upper respiratory tract, and impaired pulmonary function. Chronic exposures may result in lung disease (silicosis and/or lung cancer). (See Section 11 - Toxicological Information)

Skin Contact: Continued and prolonged contact may result in irritation to the skin. Continued chronic exposure may result in dermatitis.

Eye Contact: Direct contact may cause mechanical irritation.

Ingestion: No known adverse effects. May result in obstruction or temporary irritation of the digestive tract.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	Weight Percent
Contains:		
Calcium Carbonate or Dolomite (Limestone)	1317-65-3 16389-88-1	>50
Crystalline Silica (Quartz)	14808-60-7	<5
And may contain one or more of the following:		
Mica	12001-26-2	<10
Talc (non-asbestiform)	14807-96-6	<5
Perlite	93763-70-3	<10
Attapulgite Clay	12174-11-7	<5
Sepiolite Clay	63800-37-3	<5
Smectite Clay	1302-78-9	<5
Polyvinyl Acetate Latex	NE	<5
Ethylene Vinyl Acetate Latex	NE	<5

4. FIRST AID MEASURES

- **Inhalation:** Remove exposed individual to fresh air immediately. If breathing difficulty persists, seek medical attention.
- **Skin:** Flush and wash skin with soap and water. Utilize lotions to alleviate dryness if present. Seek medical attention if irritation persists.
- **Eye:** Immediately flush eyes with water for 15 minutes. Remove contact lenses (if applicable). Seek medical attention if irritation persists.
- **Ingestion:** This product is not expected to be hazardous and no harmful effects are expected upon ingestion of small amounts. Larger amounts may cause abdominal discomfort or possible obstruction of the digestive tract. Seek medical attention if problems persist.

5. FIRE FIGHTING MEASURES

Flammable Properties
- Not flammable or combustible
- NFPA Hazard Class No: 1/0/0

Extinguishing media
- Dry chemical, foam, water, fog or spray

Protection of firefighters
- Standard protective equipment and precautions

Fire and Explosion Hazards
- None

Hazardous Combustion Products
- None
- Above 800°C, limestone (calcium carbonate) can decompose to lime (calcium oxide) and release carbon dioxide (CO_2)

6. ACCIDENTAL RELEASE MEASURES

No special precautions required.

General recommendations:

- Wear appropriate Personal Protective Equipment. (See Section 8)
- Shovel or scoop spilled material back into container for use, if possible, or disposal.
- Maintain proper ventilation to minimize dust.
- Avoid washing material down drains. This material will eventually set and can cause clogs.
- Waste material is not a hazardous waste. Dispose of in accordance with applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

- Avoid contact with eyes, skin and clothing.
- Wear recommended personal protective equipment when handling. (See Section 8)
- Avoid breathing vapors when opening container.
- Minimize generation of dust.
- Avoid breathing dust.
- Store material in a cool, dry, ventilated area. Do not store outside or in direct sunlight.
- Keep from freezing to preserve usefulness.
- Keep containers closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

	Exposure Limits	
Component	**OSHA PEL** (mg/m3)	**ACGIH TLV** (mg/m3)
Calcium Carbonate or Dolomite (limestone)	15 (T) 5 (R)	10 (T)
Crystalline silica (Quartz)	0.1 (R)	0.025 (R)
Mica	20 mppcf	3
Talc (non-asbestiform)	20 mppcf	2
Perlite	15(T) 5(R)	10(T)
Attapulgite Clay	NL	NL
Sepiolite Clay	NL	NL
Smectite Clay	NL	NL
Polyvinyl Acetate Latex	NE	NE
Ethylene Vinyl Acetate Latex	NE	NE

T- Total Dust
R- Respirable Dust
NL - Not Listed
NE - Not Established
mppcf - million particles per cubic foot

8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

Engineering Controls

- Work/Hygiene Practices: Utilize methods to minimize dust production. Use sanders equipped with vacuum capabilities whenever possible. Utilize a light water spray when feasible.
- Ventilation: Provide local and general exhaust ventilation sufficient to maintain a dust level below the PEL/TLV.

Personal Protective Equipment

- Respiratory Protection: A NIOSH approved particulate respirator is recommended in poorly ventilated areas or if the PEL/TLV is exceeded. OSHA's 29 CFR 1910.134 (Respiratory Protection Standard) must be followed whenever work conditions require respirator use.
- Eye Protection: Safety glasses or goggles.
- Skin: Gloves, protective clothing and/or barrier creams may be utilized if conditions warrant.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White to off white
Odor: Mild latex initially, Low to none after opening
Physical State: Solid (dry)
Ph: 7-9
Solubility (H2O): insoluble
Boiling, Freezing, Melting Point: Not Applicable
Decomposition Temperature: 825°C
Vapor pressure: Not Applicable
Vapor density: Not Applicable
Volatile organic compounds (VOC) content: <10g/L

Flammability: Not Applicable
Flash Point: Not Applicable
Upper/Lower explosive limits: Not applicable
Auto-ignition temperature: Not Applicable
Partition coefficient: n-octanol/water: Not applicable
Evaporation rate: Not Applicable
Molecular weight: Mixture
Molecular formula: Not applicable
Specific Gravity: ~1.0 - 1.8
Bulk Density: 62-105 lbs/ft.^{3}

10. STABILITY AND REACTIVITY

Chemical stability: Stable in dry environments.
Conditions to avoid: Contact with strong acids may result in generation of carbon dioxide.
Incompatibility: Strong acids
Hazardous decomposition: Above 825°C decomposes to calcium oxide (CaO) and carbon dioxide ($CaCO_3$)
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Human Data

There is no information on toxicokinetics, metabolism and distribution.

This product contains quartz (crystalline silica) as a naturally occurring contaminant. Chronic exposure to crystalline silica in the respirable size has been shown to cause silicosis, a debilitating lung disease. In addition, the International Agency for Research on Cancer (IARC) classifies crystalline silica inhaled in the form of quartz or cristobalite from occupational sources as carcinogenic to humans, Group 1. The National Toxicology Program (NTP) classifies respirable crystalline silica as a substance, which may be reasonably anticipated to be a carcinogen. OSHA does not regulate crystalline silica as a human carcinogen.

11. TOXICOLOGICAL INFORMATION (CONTINUED)

Human Data (Continued)

Some products may contain attapulgite clay. IARC classifies attapulgite (long fiber) carcinogenic to humans, Group 2B. Attapulgite is not classified as a carcinogen by NTP or OSHA.

Animal Data
LD_{50} and LC_{50}: Not available

12. ECOLOGICAL INFORMATION

This product does not present an ecological hazard to the environment.

Ecotoxicological Information
None available

Environmental Fate
Limestone is a naturally occurring mineral. Biodegradation and/or bioaccumulation potential is not applicable.

13. DISPOSAL CONSIDERATIONS

This material is not considered a hazardous waste. Dispose of according to Local, State, Federal, and Provincial Environmental Regulations.

14. TRANSPORT INFORMATION

- This product is not a DOT hazardous material
- Shipping Name: Same as product name
- ICAO/IATA/IMO: Not applicable

15. REGULATORY INFORMATION

All ingredients are included on the TSCA inventory.

Federal Regulations

SARA Title III: Not listed under Sections 302, 304, and 313
CERCLA: Not listed
RCRA: Not listed
OSHA: Dust and potential respirable crystalline silica generated during product use may be hazardous.

State Regulations
California Prop 65: Respirable crystalline silica is known to the state of California to cause cancer. Industrial hygiene monitoring during recommended use of this product failed to identify any respirable crystalline silica.

Canada WHMIS
All components of this product are included in the Canadian Domestic Substances List (DSL).
Crystalline silica: WHMIS Classification D2A

16. OTHER INFORMATION

MSDS Revision Summary

Effective Date Change: 5/22/06 Supersedes: 11/23/04
Format Changes: ANSI Z400.1-2004 - Complies with GHS format

Key/Legend

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Services Number
CFR	Code of Federal Regulations
DOT	Department of Transportation
EPA	Environmental Protection Agency
HEPA	High Efficiency Particulate Air
HMIS	Hazardous Material Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
NIOSH	National Institute for Occupational Safety and Health
NFPA	National Fire Protection Association
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPE	Personal Protective Equipment
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This material safety data sheet was prepared to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and with the Workplace Hazardous Materials Information System (WHMIS).

Disclaimer of Liability:

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of the material. Information contained herein is believed to be true and accurate, but all statements or suggestions are made without any warranty, express or implied, regarding accuracy of the information, the hazards connected with the use of the material, or the results to be obtained for the use thereof.

National Gypsum

Material Safety Data Sheet

Fast Setting Joint Compounds

1. PRODUCT AND COMPANY INFORMATION

Manufacturer Information:
National Gypsum Company
2001 Rexford Road
Charlotte, NC 28211

For Emergency Product Information Call:
Director Quality Services
(704) 551-5820 - 24 Hour Emergency Response
Website: www.nationalgypsum.com

Product Name:	**ProForm® BRAND Sta-Smooth® FS90 Fire-Shield® Compound** **ProForm® BRAND Sta-Smooth® Joint Compound** **ProForm® BRAND Sta-Smooth® HS Compound** **ProForm® BRAND Sta-Smooth® Lite** **ProForm® BRAND FasTrack™** **ProForm® BRAND FasTrack Plus™** **ProForm® BRAND Quick Set™ Setting Compound** **ProForm® BRAND Quick Set™ Lite Setting Compound**
Use:	Setting type (or hardening) joint compounds used in joint finishing and repair of drywall.
Generic Descriptions:	White powder products sold in bags

2. HAZARDS IDENTIFICATION

Appearance and Odor: A white powder with no odor.

Contains no asbestos. HMIS Hazard Class No. 1, 0, 0.

Emergency Overview

ProForm® Fast Setting Joint Compound Products do not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as sanding or machining which result in the generation of airborne particulate. This product contains quartz (crystalline silica) as a naturally occurring contaminant. It is recommended that a NIOSH approved particulate respirator be worn whenever working with this product results in airborne dust exposure exceeding the prescribed limits.
(See Section 11 - Toxicological Information)

OSHA Regulatory Status

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

2. HAZARDS IDENTIFICATION (CONTINUED)

Potential Health Effects

Primary Routes of Entry: Inhalation, Dermal contact

Target Organs: Respiratory system, skin, eyes.

Inhalation: Acute exposure to airborne dust concentrations in excess of the PEL/TLV may result in coughing, dyspnea, wheezing, general irritation of the nose, throat, and upper respiratory tract, and impaired pulmonary function. Chronic exposures may result in lung disease (silicosis and/or lung cancer). (See Section 11 - Toxicological Information)

Skin Contact: Continued and prolonged contact may result in irritation to the skin. Continued chronic exposure may result in dermatitis.

Eye Contact: Direct contact may cause mechanical irritation.

Ingestion: No known adverse effects. May result in obstruction or temporary irritation of the digestive tract.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	Weight Percent
Contains:		
Crystalline silica (Quartz)	14808-60-7	<5
And may contain one or more of the following:		
Calcium Carbonate or Dolomite (Limestone)	1317-65-3 16389-88-1	>10
Mica	12001-26-2	<5
Talc (non-asbestiform)	14807-96-6	<5
Perlite	93763-70-3	<10
Attapulgite Clay	12174-11-7	<5
Calcium Sulfate Hemihydrate (Plaster of Paris)	10034-76-1	>70
Polyvinyl Alcohol	25213-24-5	<5
Poly Vinyl Acetate Latex	NE	<5

4. *FIRST AID MEASURES*

- **Inhalation:** Remove exposed individual to fresh air immediately. If breathing difficulty persists, seek medical attention.
- **Skin:** Flush and wash skin with soap and water. Utilize lotions to alleviate dryness if present. Seek medical attention if irritation persists.
- **Eye:** Immediately flush eyes with water for 15 minutes. Remove contact lenses (if applicable). Seek medical attention if irritation persists.
- **Ingestion:** This product is not expected to be hazardous and no harmful effects are expected upon ingestion of small amounts. Larger amounts may cause abdominal discomfort or possible obstruction of the digestive tract. Seek medical attention if problems persist.

5. *FIRE FIGHTING MEASURES*

Flammable Properties
- Not flammable or combustible
- NFPA Hazard Class No: 1/0/0

Extinguishing media
- Dry chemical, foam, water, fog or spray

Protection of firefighters
- Standard protective equipment and precautions

Fire and Explosion Hazards
- None

Hazardous Combustion Products
- None
- Above 800°C, limestone (calcium carbonate) can decompose to lime (calcium oxide) and release carbon dioxide (CO_2)
- Above 1450°C, gypsum can decompose and release sulfur dioxide (SO_2) and oxides of carbon.

6. *ACCIDENTAL RELEASE MEASURES*

No special precautions required.

General recommendations:

- Wear appropriate Personal Protective Equipment. (See Section 8)
- Shovel or scoop spilled material back into container for use, if possible, or disposal.
- Maintain proper ventilation to minimize dust.
- Avoid washing material down drains. This material will eventually set and can cause clogs.
- Waste material is not a hazardous waste. Dispose of in accordance with applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

- Avoid contact with eyes, skin and clothing.
- Wear recommended personal protective equipment when handling. (See Section 8)
- Minimize generation of dust.
- Avoid breathing dust.
- Store material in a cool, dry, ventilated area. Do not store outside or in direct sunlight.
- Keep from freezing to preserve usefulness.
- Keep containers closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

	Exposure Limits	
Component	**OSHA PEL** (mg/m3)	**ACGIH TLV** (mg/m3)
Calcium Carbonate or Dolomite (Limestone)	15 (T) 5 (R)	10 (T)
Crystalline silica (Quartz)	0.1 (R)	0.025 (R)
Mica	20 mppcf	3
Talc (non-asbestiform)	20 mppcf	2
Perlite	15(T) 5(R)	10(T)
Attapulgite Clay	NL	NL
Calcium Sulfate Hemihydrate (Plaster of Paris)	15(T) 5(R)	10(T)
Polyvinyl Alcohol	NE	NE
Polyvinyl Acetate Latex	NE	NE

T- Total Dust
R- Respirable Dust
NL - Not Listed
NE - Not Established
mppcf - million particles per cubic foot

8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

Engineering Controls

- Work/Hygiene Practices: Utilize methods to minimize dust production. Use sanders equipped with vacuum capabilities whenever possible. Utilize a light water spray when feasible.
- Ventilation: Provide local and general exhaust ventilation sufficient to maintain a dust level below the PEL/TLV.

Personal Protective Equipment

- Respiratory Protection: A NIOSH approved particulate respirator is recommended in poorly ventilated areas or if the PEL/TLV is exceeded. OSHA's 29 CFR 1910.134 (Respiratory Protection Standard) must be followed whenever work conditions require respirator use.
- Eye Protection: Safety glasses or goggles.
- Skin: Gloves, protective clothing and/or barrier creams may be utilized if conditions warrant.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White to off white
Odor: None
Physical State: Solid
Ph: 7-9
Solubility (H2O): insoluble
Boiling, Freezing, Melting Point: Not Applicable
Decomposition Temperature: 825°C; 1450°C
Vapor pressure: Not Applicable
Vapor density: Not Applicable
Volatile organic compounds (VOC) content: None

Flammability: Not Applicable
Flash Point: Not Applicable
Upper/Lower explosive limits: Not applicable
Auto-ignition temperature: Not Applicable
Partition coefficient: n-octanol/water: Not applicable
Evaporation rate: Not Applicable
Molecular weight: Mixture
Molecular formula: Not Applicable
Specific Gravity: ~2.5
Bulk Density: ~55-70 lbs/ft^3

10. STABILITY AND REACTIVITY

Chemical stability: Stable in dry environments.
Conditions to avoid: Contact with strong acids may result in generation of carbon dioxide.
Incompatibility: Strong acids
Hazardous decomposition: Above 825°C decomposes to calcium oxide (CaO) and carbon dioxide. ($CaCO_3$) Above 1450°C, gypsum can decompose and release sulfur dioxide (SO_2) and oxides of carbon.
Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Human Data

There is no information on toxicokinetics, metabolism and distribution.

This product contains quartz (crystalline silica) as a naturally occurring contaminant. Chronic exposure to crystalline silica in the respirable size has been shown to cause silicosis, a debilitating lung disease. In addition, the International Agency for Research on Cancer (IARC) classifies crystalline silica inhaled in the form of quartz or cristobalite from occupational sources as carcinogenic to humans, Group 1. The National Toxicology Program (NTP) classifies respirable crystalline silica as a substance, which may be

reasonably anticipated to be a carcinogen. OSHA does not regulate crystalline silica as a human carcinogen.
Some products may contain attapulgite clay. IARC classifies attapulgite (long fiber) carcinogenic to humans, Group 2B. Attapulgite is not classified as a carcinogen by NTP or OSHA.

11. TOXICOLOGICAL INFORMATION (CONTINUED)

Animal Data
Gypsum: The acute oral toxicity study [OECD TG 420, Fixed dose procedure] of calcium sulfate dihydrate showed that this chemical did not cause any changes even at 2,000 mg/kg b.w. Therefore, the oral LD_{50} value was more than 2,000-mg/kg b.w. for female rats (Sprague-Dawley).

Calcium sulfate, dihydrate was not irritating to the skin of rabbits at 1, 24, 48 and 72 hours after removal of test patches [OECD TG 404]. There is no indication of skin sensitization in guinea pigs [OECD TG 406].

Invivo and *Invitro* studies for mutagenicity were negative.

Reproduction/Developmental Toxicity Screening Tests were negative.

Plaster of Paris: Oral LD_{50} (rat): >5000 mg/kg
No evidence of mutagenicity on Ames Test.

LD_{50} and LC_{50} data not available for the product.

12. ECOLOGICAL INFORMATION

This product does not present an ecological hazard to the environment.

Ecotoxicological Information
None available

Environmental Fate
Limestone and gypsum are naturally occurring minerals. Biodegradation and/or bioaccumulation potential is not applicable.

13. DISPOSAL CONSIDERATIONS

This material is not considered a hazardous waste.
Dispose of according to Local, State, Federal, and Provincial Environmental Regulations.

14. TRANSPORT INFORMATION

- This product is not a DOT hazardous material
- Shipping Name: Same as product name
- ICAO/IATA/IMO: Not applicable

15. REGULATORY INFORMATION

All ingredients are included on the TSCA inventory.

Federal Regulations

SARA Title III: Not listed under Sections 302, 304, and 313
CERCLA: Not listed
RCRA: Not listed
OSHA: Dust and potential respirable crystalline silica generated during product use may be hazardous.

15. REGULATORY INFORMATION (CONTINUED)

State Regulations
California Prop 65: Respirable crystalline silica is known to the state of California to cause cancer. Industrial hygiene monitoring during recommended use of this product failed to identify any respirable crystalline silica.

Canada WHMIS
All components of this product are included in the Canadian Domestic Substances List (DSL).
Crystalline silica: WHMIS Classification D2A

16. OTHER INFORMATION

MSDS Revision Summary
Effective Date Change: 5/22/06 Supersedes: 1/26/04
Format Changes: ANSI Z400.1

Key/Legend

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Services Number
CFR	Code of Federal Regulations
DOT	Department of Transportation
EPA	Environmental Protection Agency
HEPA	High Efficiency Particulate Air
HMIS	Hazardous Material Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
NIOSH	National Institute for Occupational Safety and Health
NFPA	National Fire Protection Association
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PPE	Personal Protective Equipment
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This material safety data sheet was prepared to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and with the Workplace Hazardous Materials Information System (WHMIS).

Disclaimer of Liability:

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of the material. Information contained herein is believed to be true and accurate, but all statements or suggestions are made without any warranty, express or implied, regarding accuracy of the information, the hazards connected with the use of the material, or the results to be obtained for the use thereof.

Armstrong

MATERIAL SAFETY DATA SHEET

Armstrong World Industries, Inc.
Environment, Health and Safety
2500 Columbia Avenue, P.O. Box 3001
Lancaster, PA 17604
Telephone (717) 396-2328 or 396-2935

Issued By : Safety, Health and
Industrial Hygiene Department

HMIS (0 = minimal hazard, 4 = severe hazard)
Health = 1
Flammability = 0
Reactivity = 0

Division: Building Products

Date: 1/10/06 (replaces 6/1/00)

N/A = Not applicable or Not Available
N/K = None Known or Not Known

Department of Transportation Information
Shipping name : Not Classified
Hazard Class : N/A
ID No : N/A
Emergency Only Contact: CHEM-TEL 800-255-3924

I. Product Information

A. Product Name : Man-made Vitreous Fiber Ceilings and Wall Panels (Fire Guard) - MSDS #2
B. Chemical Name and Synonyms : N/A
C. Chemical or Product Family : Man-made Vitreous Fibers

II. Ingredient Information

A. Hazardous Components (Chemical Identity; Common Name)	C.A.S No.	%	OSHA PEL Respirable:	ACGIH TLV Respirable:
Mineral Wool Fiber	N/A	0-60	15 mg/m3 (as nuisance dust)	1 f/cc
Fibrous Glass	65997-17-3	0-5	5 mg/m3 (as respirable nuisance dust)	1 f/cc
Hydrous Aluminum Silicate	14808-60-7	15-25	0.1 mg/m3 (as respirable crystalline silica)	0.1 mg/m3 (as respirable crystalline silica)

This product formulation does not contain asbestos.

III. Physical Data

A. Appearance and Color : Gray, pressed man-made vitreous fiber panel of various colors
B. Boiling Point (degrees F) : N/A
C. Vapor pressure (mm Hg @ 20 degrees C) : N/A
D. Vapor density (Air = 1) : N/A
E. Solubility in Water : N/A
F. Specific Gravity (H_2O = 1) : N/A
G. Percent Volatile by weight (30 min. @ 275 degrees F) : N/A
H. Evaporation Rate (Butyl Acetate = 1) : N/A
I. pH : N/A

IV. Fire and Explosion Data

A. Flash point : N/A
B. Flammable Range : LEL = N/A ; UEL = N/A
C. Extinguishing Media : Water fog, dry chemical ABC rated
D. Special Fire Fighting Procedures : None
E. Unusual Fire and Explosion Hazards : None

V. Health Data

A. Primary Route (s) of Entry: Inhalation, skin, and eye contact

B. Target Organs: Lungs, skin and eyes

Effects of Overexposure :

Acute Health Effects: Products are a transient mechanical irritant to the skin, eyes and upper respiratory system. Refer to special protection information for handling instructions.

Mineral Wool Fiber: Mineral wool fiber has been classified as "not classifiable as to its carcinogenicity to human" (Group 3) by the International Agency for Research on Cancer (IARC).

Fibrous Glass : Fibrous glass has been classified as "not classifiable as to its carcinogenicity to human" (Group 3) by the International Agency for Research on Cancer (IARC). Fibrous glass is listed by NTP as 2, reasonably anticipated to be a carcinogen.

Crystalline Silica: Long term exposure to crystalline silica dust in concentrations higher than the recommended PEL or TLV may cause silicosis. NTP has classified respirable crystalline silica as a substance that may be anticipated to be a carcinogen. IARC has established a Group 1 classification to crystalline silica as a known carcinogen to humans.

C. Carcinogenicity: NTP : Yes IARC Monographs : Yes OSHA Regulated : No

D. Medical Conditions Generally aggravated by Exposure: Any condition generally aggravated by respiratory and mechanical irritants in the air or on the skin. Pre-existing upper respiratory and lung disease such as, but not limited to bronchitis, emphysema, and asthma.

E. First Aid Procedures:
Skin: Wash with mild soap and running water
Eyes: Flush with flowing water for at least 15 minutes and if symptoms persist, seek immediate medical attention.

VI. Reactivity Data

A. Stability : Material is stable

B. Incompatibility: N/K

C. Hazardous Decomposition Products: Carbon dioxide, and other trace pyrolysis products typical of decomposition of any organic compound.

D. Hazardous Polymerization: N/A

VII. Spill or Leak Procedures

A. Steps to be taken if material is released or spilled : N/A

B. Waste Disposal method : Dispose in accordance with federal, state and local waste disposal regulations. The primary method of disposal is in a municipal or industrial landfill.

VIII. Special Protection Information

During the installation, be certain that the work site is well ventilated, and avoid breathing dust.

Wear loose, comfortable clothing and long-sleeved shirts to minimize skin contact with these materials.

Handle these materials carefully to minimize airborne dust.

If high dust levels are anticipated during installation, such as with the use of power tools, use the appropriate NIOSH approved dust respirator.

All power cutting tools must be equipped with dust collectors.

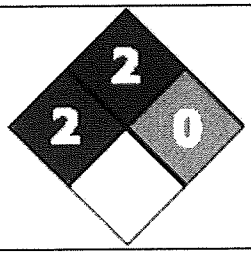
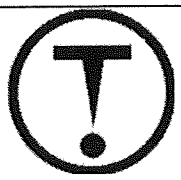
After using these materials, wash with warm water and mild soap. Do not scratch or rub skin if it becomes irritated.

Wash work clothes separately, and then rinse the washer.

The information presented herein is supplied as a guide to those who handle or use this product. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.

MATERIAL SAFETY DATA SHEET

INNOVATIONS FOR LIVING™

NFPA	WHMIS	Personal Protective Equipment	Transport Symbol
			not regulated

Preparation Date: 16-December-1997 **Revision Date** 17-July-2007 **Revision Number** 20

1. PRODUCT and COMPANY IDENTIFICATION

Generic Product Name Low Density Fiber Glass Insulation/Insulation Board – Unfaced Products

Common name Acoustical Backing Board, Advanced ThermaCube Plus®, Blended Blowing Wool, Cathedral Batt Insulation, Cavity Wall, Cold Storage Wall, Curtain Wall 225, Flexible Marine, Flexible Type 75 AF-FDM, HV-24, HV-26, H_2V-1000, H_2V-2000, Insulation Batts, Manufactured Housing Insulation, Masonry Wall Insulation, Metal Building (all types), Metal Framing Batts, Metal Framing Insulation, Multi-purpose Insulation, Noise Stop Board, Pink® Insulation, Pink Pak, QuietZone® Acoustic Batt, RA Series, Shaft Wall, Sill Sealer, Sonobatts®, Sound Attenuation Batts, Standard Blend, Super Pink R Blowing Wool, ThermaGlas®, Marine Board, Unfaced Duct Wrap, Warm-N-Dri®, YELLOW JACKET® Fiber Glass Insulation, and YELLOW JACKET® Loose Fill

MSDS No. 13614-NAM-EN

Recommended Use Insulation

Contact manufacturer
Owens Corning Insulating Systems, LLC
One Owens Corning Parkway
Toledo, OH 43659

Emergency telephone number

Emergencies Only (after 5 pm AND weekends)	1-419-248-5330
CHEMTREC (24 hours everyday)	1-800-424-9300
CAUNTEC (Canada – 24 hours everyday)	1-613-996-6666

Health and Technical contacts

Health Issues Information (8am-5pm ET):	1-419-248-8234
Technical Product Information (8am-5pm ET):	1-800-GET-PINK or 1-800-438-7465

2. HAZARD IDENTIFICATION

Emergency Overview
Exposure to dust may be irritating to eyes, nose and throat.

Appearance: Pink, Yellow, Tan **Physical State:** Solid, Fibrous **Odor:** Faint Resin

Potential Health Effects

Principle Routes of Exposure Eye
Skin Contact
Inhalation

Acute Effects

- **Eyes** May cause slight irritation
- **Skin** May cause slight skin irritation
- **Inhalation** May cause irritation of respiratory tract
- **Ingestion** Ingestion of material is unlikely

Chronic Effects There is no known chronic health effect connected with long-term use or contact with these products

Aggravated Medical Conditions
Chronic respiratory or skin conditions may temporarily worsen from exposure to this product

Carcinogenic Status
This product contains a component which is listed by IARC, OSHA or NTP. See Section 11

OSHA Regulatory Status
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Potential Environmental Effects
There is no known ecological information for this product

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Component	Percent by Wt.
65997-17-3	Glass Fiber, Wool	85-100
25104-55-6	Urea, polymer with formaldehyde and phenol	0-15

Non-Hazardous Statement The remaining components of this product are non-hazardous or are in small enough quantities as to not meet regulatory thresholds for disclosure. These components contain no substances or impurities which would influence the classification of this product.

4. FIRST AID MEASURES

Eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 Minutes
- Do not rub or scratch eyes
- If eye irritation persists, consult a specialist

Skin contact

- Wash off immediately with soap and cold water.
- DO NOT use warm water because this will open up the pores of the skin, which will cause further penetration of the fibers.
- DO NOT rub or scratch affected areas.
- Use a wash cloth to help remove fibers or apply and remove an adhesive tape so that the fibers adhere to the tape and are pulled out of the skin.
- Remove contaminated clothing.
- If skin irritation persists, call a physician
- **Never use compressed air to remove fibers from skin**

Ingestion

- Accidental ingestion of this material is unlikely
- If this does occur, watch person for several days to make sure intestinal blockage does not occur
- Rinse mouth with water to remove fibers from the throat
- If symptoms persist, call a physician

Inhalation

- Move to fresh air
- If symptoms persist, call a physician

5. FIRE-FIGHTING MEASURES

Flammability/Combustibility Properties Non-flammable

Suitable extinguishing media

dry chemical
foam
carbon dioxide (CO2)
water fog

Unsuitable Extinguishing Media None

Hazardous Combustion Products

Carbon Monoxide
Carbon Dioxide (CO2)
Ammonia
Other undetermined compounds could be released in small quantities

Explosion Data

Sensitivity to Mechanical Impact Not available
Sensitivity to Static Discharge Not available

Special Hazards Arising from the Chemical

No unusual fire and explosions hazards are expected from this product

Protective Equipment and Precautions for Firefighters

Wear self-contained breathing apparatus (SCBA) and full fire fighting protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Avoid contact with the skin and the eyes.

Methods for Containment

- Material will settle out of air
- Prevent from spreading by covering or other means

Methods for Clean-up

- Use an industrial vacuum cleaner with a high efficiency filter to clean up dust and fiber contamination
- Avoid dry sweeping
- After cleaning, flush away traces with water
- Pick up and transfer to properly labeled containers

7. HANDLING AND STORAGE

Handling

- Avoid dust formation
- Do not breathe dust
- Wear personal protective equipment

Storage

- Keep product in its packaging until use to minimize potential dust generation.
- Material should be kept dry and covered

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

	ACGIH TLV	OSHA PEL	Ontario TWAEV	Mexico
Glass Fiber – Wool 65997-17-3	1 f/cc (respirable) 10 mg/m^3 (inhalable synthetic vitreous fibers) 3 mg/m^3 (respirable fraction - PNOC	1 f/cc (respirable)	STEL – 0.6 mg/m^3 TWA – 0.05 mg/m^3 TWA – 1 f/cc	TWA – 0.15 mg/m^3

Engineering Controls

- Provide local exhaust and/or general ventilation to maintain exposure below regulatory and recommended limits.
- Dust collection system must be used in transferring operations, cutting or machining or other dust generating process.
- Vacuum or wet clean-up methods should be used

Personal protective equipment

Respiratory protection• When workers are facing concentrations above the exposure limit they must use appropriate certified respirators such as 3M model 8210 (3M model 8271 in high humidity environments)

Eye/face Protection Safety glasses with side-shields

Skin Protection

- Protective gloves
- Long sleeved shirt and long pants

General Hygiene Considerations

- Wash hands before breaks and immediately after handling the product
- Avoid contact with skin, eyes and clothing
- Avoid getting dust into boots and gloves through wrist bands and pant tucks
- Remove and wash contaminated clothing before re-use

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Pink, yellow, tan	
Odor	Faint resin (organic)	
Physical State	Solid, fibrous	
pH	Does not apply	
Flash point	Not available	
Autoignition temperature	Does not apply	
Boiling Point	Does not apply	
Melting point/range	Not available	
Flammability Limits in Air	**lower /**	**upper /**
Explosive properties	Does not apply	
Oxidizing properties	Does not apply	
Vapor Pressure	Does not apply	
Specific Gravity	Does not apply	
Water solubility	Insoluble	
VOC content	Not available	

10. STABILITY AND REACTIVITY

Chemical Stability Stable

Conditions to avoid None expected

Incompatible Materials None expected

Hazardous decomposition products See Section 5 for hazardous decomposition products during a fire

Possibility of Hazardous Reactions Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Acute toxicity

General Product Information

Dusts may cause mechanical irritation to eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. Higher exposures may cause difficulty breathing, congestion and chest tightness.

Component Analysis – LD50/LC50

	LD50 Oral
Urea, polymer with formaldehyde and phenol	7 g/kg Rat

Chronic toxicity

Fiber Glass Wool: In October 2001, the International Agency for Research on Cancer (IARC) classified fiber glass wool as Group 3, "not classifiable as to its carcinogenicity to humans." The 2001 decision was based on human studies and animal research that have not shown an association between inhalation exposure to dust from fiber glass wool and the development of respiratory disease. This classification replaces the IARC finding in 1987 of a Group B designation "possibly carcinogenic to humans."

In May 1997, the American Conference of Governmental Industrial Hygienists (ACGIH) adopted an A3 carcinogen classification for glass wool fibers. The ACGIH A3 classification considers glass wool to be carcinogenic in experimental animals at relatively high doses, by routes of administration, at sites, or by mechanisms that it does not consider relevant to worker exposure. It also reviewed the available epidemiological studies and concluded that they do not confirm an increased risk of cancer in exposed humans. Overall, the ACGIH found that the available medical/scientific evidence suggests that glass wool is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

In 1994, the National Toxicology Program (NTP) classified glass wool (respirable size) as "reasonably anticipated to be a human carcinogen." This classification was primarily based upon the 1987 IARC classification. NTP is currently considering reclassifying this material.

Component Analysis

	ACGIH	IARC	OSHA	NTP	Mexico
Fiber Glass, Wool 65997-17-3	A3 animal carcinogen	Group 3 not classifiable	X	Reasonably Anticipated	A3 animal carcinogen

Allergy No information available
Neurological Effects No information available
Mutagenic Effects No information available
Reproductive Effects No information available
Developmental Effects No information available
Target Organ Effects No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity: This material is not expected to cause harm to animals, plants or fish

Chemical Fate

Persistance/Degradability Not available
Bioaccumulation/Accumulation Not available
Mobility in Environmental Media Not available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of in accordance with Local, State, Federal and Provincial regulations.

Contaminated packaging Empty containers should be taken for local recycling, recovery or waste disposal.

US EPA Waste Number No EPA Waste Numbers are applicable for this product's components.

RCRA This material is not expected to be a characteristic hazardous waste under RCRA

14. TRANSPORT INFORMATION

DOT not regulated
TDG not regulated
IMDG/IMO not regulated
RID not regulated
ADR not regulated
ICAO not regulated
IATA not regulated
MEX not regulated

15. REGULATORY INFORMATION

International Inventories
All components of this product are either listed on the following inventories or are exempt.

	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	China	KECL	PICCS	AICS
Glass Fiber – Wool 65997-17-3	XU	Present	-	266-046-0	-	-	Present	KE-17630	GEN-0994	Present
Urea, polymer with formaldehyde and phenol 25104-55-6	XU	Present	-	-	-	7-907	Present	KE-35185	-	Present

USA
Federal Regulations

SARA 313 Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)
This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazardous Categorization

Acute Health Hazards	yes
Chronic Health Hazards	yes
Risk of Ignition	no
Sudden Release of Pressure	no
Reactive Hazard	no

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any HAPs

State Regulations

California Proposition 65

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the State of California to cause cancer.

State Right-To-Know

	CA	MA	MN	NJ	PA	IL	RI
Glass Fiber, Wool	X	X	X		X	X	X

Canada

Component Analysis – WHMIS IDL
The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	
Fiber Glass, Wool	65997-17-3	1% item 768 (884) (related to Fibrous Glass)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Status Controlled
WHMIS Classification D2A-Carcinogenicity, D2B-Irritation

16. OTHER INFORMATION

Preparation Date: 16-December-1997

Revision Date 17-July-2007

Revision Summary New format and company name

Disclaimer
Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use

End of Safety Data Sheet

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION.

W. F. Taylor Co., Inc.
11545 Pacific Avenue
Fontana, CA 92337-8228
951/360-6677
CHEMICAL EMERGENCY HOTLINE 1-800-535-5053

PRODUCT NAME: **SHAW SUPERIOR GRADE CARPET ADHESIVE 1000**
ITEM NUMBER: 1000-4-SI
ITEM DESCRIPTION: Shaw 1000 Superior Grade Carpet Adhesive 4-gal
PRODUCT DESCRIPTION: LATEX BASED ADHESIVE
CHEMICAL FAMILY: SYNTHETIC RUBBER, RESIN BLEND
REVISION DATE: 08/05/09

MANUFACTURED FOR: SHAW INDUSTRIES
ADDRESS: P.O. DRAWER 2128
DALTON, GA
PHONE NO.: (800) 441 - 7429
EMERGENCY PHONE NO.: (800) 535 - 5053
CHEMICAL NAMES, COMMON NAMES: SYNTHETIC RUBBER, RESIN BLEND
TRADE NAME: SHAW SUPERIOR GRADE CARPET ADHESIVE 1000

HMIS HAZARD RATING

LEAST:	0	HEALTH:	0
SLIGHT:	1	FLAMMABLE:	0
MODERATE:	2	REACTIVITY:	0
HIGH:	3		
EXTREME:	4		

PREPARED BY: DARWIN C. REGIS
PREEMPTS PREVIOUS MSDS SHEETS

SECTION II HAZARDOUS INGREDIENTS

COMPONENT/CAS #	ACGIH TLV	OSHA PEL	% WT	NOTES
NO HAZARDOUS INGREDIENTS PER CURRENT OSHA REGULATIONS				

SECTION III PHYSICAL DATA

BOILING POINT: 212 DEGREES F
LBS / GALLON: 9.7 - 10.1
EVAPORATION RATE: SAME AS WATER
VAPOR DENSITY: SAME AS WATER
VAPOR PRESSURE: SAME AS WATER
PERCENT VOLATILE: 34-36 (BY WEIGHT)
COLOR: OFF WHITE
ODOR: NIL
GRAMS V.O.C. PER LITER OF MATERIAL: less than 0.5

SECTION IV FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY: NOT REGULATED
F H POINT: NONE LEL: NA
EXTINGUISHING MEDIA: NONE REQUIRED
UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE
SPECIAL FIRE FIGHTING PROCEDURES: NONE

PRODUCT NAME:	**SHAW SUPERIOR GRADE CARPET ADHESIVE 1000**
ITEM NUMBER:	1000-4-SI
ITEM DESCRIPTION:	Shaw 1000 Superior Grade Carpet Adhesive 4-gal
REVISION DATE:	08/05/09

SECTION V HEALTH HAZARD IDENTIFICATION

SYMPTOMS OF OVER EXPOSURE:
INHALATION: NONE KNOWN
EYES: MAY CAUSE MILD IRRITATION
SKIN: NONE KNOWN
INGESTION: NONE KNOWN

FIRST AID PROCEDURES:
EYES: FLUSH WITH WATER
SKIN: WASH WITH SOAP AND WATER
INHALATION: REMOVE TO FRESH AIR IF NEEDED

INGESTION: DO NOT INDUCE VOMITING. CALL PHYSICIAN IMMEDIATELY.

SECTION VI REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID: NONE KNOWN
INCOMPATIBILTY-MATERIALS TO AVOID: NONE KNOWN
HAZARDOUS DECOMPOSITION PRODUCTS: NONE KNOWN
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED
KEEP OUT OF SEWER SYSTEMS TO PREVENT BLOCKAGE DUE TO POLYMER DEPOSITS. USE ABSORBENT MATERIAL TO COLLECT AND/OR SCRAPE UP EXCESS AND PLACE INTO CLOSED DOT APPROVED CONTAINERS FOR DISPOSAL.

WASTE DISPOSAL: ABIDE BY ALL STATE, FEDERAL AND LOCAL REGULATIONS.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NONE NEEDED
VENTILATION: LOCAL EXHAUST
PROTECTIVE GLOVES: NONE REQUIRED
EYES: GOGGLES
OTHER PROTECTIVE EQUIPMENT: NONE

SECTION IX SPECIAL PRECAUTIONS

PRECAUTION FOR HANDLING AND STORING: DO NOT PUNCTURE.
KEEP OUT OF THE REACH OF CHILDREN.
PROTECT FROM FREEZING
CAUTION: DO NOT TAKE INTERNALLY. IF SWALLOWED, DO NOT INDUCE VOMITING, CALL PHYSICIAN IMMEDIATELY.

NOTICE

SHAW INDUSTRIES EXPRESSLY DISCLAIMS ALL EXPRESS OR APPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE PRODUCT OR INFORMATION PROVIDED HEREIN. ALL INFORMATION APPEARING HEREIN IS BASED UPON A DATA OBTAINED FROM THE MANUFACTURER AND/OR RECOGNIZED TECHNICAL SOURCES. WHILE THE INFORMATION IS BELIEVED TO BE ACCURATE, SHAW INDUSTRIES MAKES NO REPRESENTATIONS AS TO ITS ACCURACY OR EFFICIENCY. CONDITIONS OF USE ARE BEYOND SHAW'S CONTROL AND THEREFORUSERS ARE RESPONSIBLE TO VERIFY THIS DATA UNDER THEIR OWN OPERATING CONDITIONS TO DETERMINE WHETHER THE PRODUCT IS SUITABLE FOR THEIR PARTICULAR PURPOSES AND THEY ASSUME ALL RISKS OF THEIR USE, HANDLING, AND DISPOSAL OF THE PRODUCT, OR FROM PUBLICATION OF USE OF, OR RELIANCE UPON, INFORMATION CONTAINED HEREIN. THIS INFORMATION RELATES ONLY TO THE PRODUCT DESIGNATED

PRODUCT NAME:	**SHAW SUPERIOR GRADE CARPET ADHESIVE 1000**
ITEM NUMBER:	1000-4-SI
ITEM DESCRIPTION:	Shaw 1000 Superior Grade Carpet Adhesive 4-gal
REVISION DATE:	08/05/09

HEREIN, AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY
[illegible]ESS.

NATIONAL REFRIGERANTS™

Material Safety Data Sheet

R-134A

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: R-134A
DISTRIBUTOR: National Refrigerants, Inc.
661 Kenyon Avenue
Bridgeton, New Jersey 08302

FOR MORE INFORMATION CALL:
(Monday-Friday, 9:00am-5:00pm)
1-800-262-0012

IN CASE OF EMERGENCY CALL:
CHEMTREC: 1-800-424-9300

2. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS NUMBER	WEIGHT %
1,1,1,2-Tetrafluoroethane	811-97-2	100

Trace impurities and additional material names not listed above may also appear in Section 15 toward the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Colorless, volatile liquid with ethereal and faint sweetish odor. Non-flammable material. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphyxiation in confined spaces. At higher temperatures, (>250°C), decomposition products may include Hydrofluoric Acid (HF) and carbonyl halides.

POTENTIAL HEALTH HAZARDS

SKIN: Irritation would result from a defatting action on tissue. Liquid contact could cause frostbite.

EYES: Liquid contact can cause severe irritation and frostbite. Mist may irritate.

INHALATION: R-134A is low in acute toxicity in animals. When oxygen levels in air are reduced to 12-14% by displacement, symptoms of asphyxiation, loss of coordination, increased pulse rate and deeper respiration will occur. At high levels, cardiac arrhythmia may occur.

INGESTION: Ingestion is unlikely because of the low boiling point of the material. Should it occur, discomfort in the gastrointestinal tract from rapid evaporation of the material and consequent evolution of gas would result. Some effects of inhalation and skin exposure would be expected.

DELAYED EFFECTS: None Known

Ingredients found on one of the OSHA designated carcinogen lists are listed below.

INGREDIENT NAME	NTP STATUS	IARC STATUS	OSHA LIST
No ingredients listed in this section			

4. FIRST AID MEASURES

SKIN: Promptly flush skin with water until all chemical is removed. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. Get medical attention if symptoms persist.

EYES: Immediately flush eyes with large amounts of water for at least 15 minutes (in case of frostbite, water should be lukewarm, not hot) lifting eyelids occasionally to facilitate irrigation. Get medical attention if symptoms persist.

INHALATION: Immediately remove to fresh air. If breathing has stopped, give artificial respiration. Use oxygen as required, provided a qualified operator is available. Get medical attention immediately. DO NOT give epinephrine (adrenaline).

INGESTION: Ingestion is unlikely because of the physical properties and is not expected to be hazardous. DO NOT induce vomiting unless instructed to do so by a physician.

ADVICE TO PHYSICIAN: Because of the possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution and only in situations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT:	Gas, not applicable per DOT regulations
FLASH POINT METHOD:	Not applicable
AUTOIGNITION TEMPERATURE:	>750°C
UPPER FLAME LIMIT (volume % in air):	None*
LOWER FLAME LIMIT (volume % in air):	None*
	*Based on ASHRAE Standard 34 with match ignition
FLAME PROPAGATION RATE (solids):	Not applicable
OSHA FLAMMABILITY CLASS:	Not applicable

EXTINGUISHING MEDIA:

Use any standard agent – choose the one most appropriate for type of surrounding fire (material itself is not flammable)

UNUSUAL FIRE AND EXPLOSION HAZARDS:

R-134A is not flammable at ambient temperatures and atmospheric pressure. However, this material will become combustible when mixed with air under pressure and exposed to strong ignition sources.
Contact with certain reactive metals may result in formation of explosive or exothermic reactions under specific conditions (e.g. very high temperatures and/or appropriate pressures).

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (Always wear recommended personal protective equipment.)

Evacuate unprotected personnel. Protected personnel should remove ignition sources and shut off leak, if without risk, and provide ventilation. Unprotected personnel should not return until air has been tested and determined safe, including low-lying areas.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

7. HANDLING AND STORAGE

NORMAL HANDLING: (Always wear recommended personal protective equipment.)

Avoid breathing vapors and liquid contact with eyes, skin or clothing. Do not puncture or drop cylinders, expose them to open flame or excessive heat. Use authorized cylinders only. Follow standard safety precautions for handling and use of compressed gas cylinders.

R-134A should not be mixed with air above atmospheric pressure for leak testing or any other purpose.

STORAGE RECOMMENDATIONS:

Store in a cool, well-ventilated area of low fire risk and out of direct sunlight. Protect cylinder and its fittings from physical damage. Storage in subsurface locations should be avoided. Close valve tightly after use and when empty.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide local ventilation at filling zones and areas where leakage is probable. Mechanical (general) ventilation may be adequate for other operating and storage areas.

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION:

Skin contact with refrigerant may cause frostbite. General work clothing and gloves (leather) should provide adequate protection. If prolonged contact with liquid or gas is anticipated, insulated gloves constructed of PVA, neoprene or butyl rubber should be used. Any contaminated clothing should be promptly removed and washed before reuse.

EYE PROTECTION:

For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear chemical safety goggles.

RESPIRATORY PROTECTION:

None generally required for adequately ventilated work situations. For accidental release or non-ventilated situations, or release into confined space, where the concentration may be above the PEL of 1,000 ppm, use a self-contained, NIOSH approved breathing apparatus or supplied air respirator. For escape: use the former or a NIOSH approved gas mask with organic vapor canister.

ADDITIONAL RECOMMENDATIONS:

Where contact with liquid is likely, such as in a spill or leak, impervious boots and clothing should be worn. High dose-level warning signs are recommended for areas of principle exposure. Provide eyewash stations and quick-drench shower facilities at convenient locations. For tank cleaning operations, see OSHA regulations, 29 CFR 1910.132 and 29 CFR 1910.133.

EXPOSURE GUIDELINES

INGREDIENT NAME	ACGIH TLV	OSHA PEL	OTHER LIMIT
1,1,1,2-Tetrafluoroethane	None	None	*1000 ppm TWA (8hr) **1000 ppm TWA (8hr)

* = Limit established by National Refrigerants, Inc.
** = Workplace Environmental Exposure Level (AIHA)
*** = Biological Exposure Index (ACGIH)

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, colorless liquid and vapor	
PHYSICAL STATE:	Gas at ambient temperatures	
MOLECULAR WEIGHT:	102	
CHEMICAL FORMULA:	F_3CCH_2F	
ODOR:	Faint ethereal odor	
SPECIFIC GRAVITY (water = 1.0):	<1.22	
SOLUBILITY IN WATER (weight %):	0.15 wt%	
pH:	Neutral	
BOILING POINT:	-26.2°C (-15.1°F)	
FREEZING POINT:	-92.5°C (-141.9°F)	
VAPOR PRESSURE:	85.8 psia @ 70°F 213.4 psia @ 130°F	
VAPOR DENSITY (air = 1.0):	3.5	
EVAPORATION RATE:	>1	**COMPARED TO:** CCl_4 = 1
% VOLATILES:	100	
FLASH POINT:	Not applicable	

(Flash point method and additional flammability data are found in Section 5.)

10. STABILITY AND REACTIVITY

NORMALLY STABLE? (CONDITIONS TO AVOID):

The product is stable.
Do not mix with oxygen or air above atmospheric pressure. Any source of high temperatures, such as lighted cigarettes, flames, hot spots or welding may yield toxic and/or corrosive decomposition products.

INCOMPATIBILITIES:

(Under specific conditions: e.g. very high temperatures and/or appropriate pressures) – Freshly abraded aluminum surfaces (may cause strong exothermic reaction). Chemically reactive metals: potassium, calcium, powdered aluminum, magnesium, and zinc.

HAZARDOUS DECOMPOSITION PRODUCTS:

Halogens, halogen acids and possibly carbonyl halides.

HAZARDOUS POLYMERIZATION:

Will not occur.

1. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:

LC_{50} : 4 hr. (rat) - > 500,000 ppm / Cardiac Sensitization threshold (dog) 80,000 ppm. NOEL – 50,000 ppm

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

Not mutagenic in four tests
Teratogenic NOEL (rat and rabbit) – 40,000 ppm
Subchronic inhalation (rat) NOEL – 50,000 ppm
Chronic NOEL – 10,000 ppm

OTHER DATA:

Metabolism <0.5% as CO_2 in tests at 50,000 ppm, late developing benign tumors were found.

12. ECOLOGICAL INFORMATION

Degradability (BOD): R-134A is a gas at room temperature; therefore, it is unlikely to remain in water.
Octanol Water Partition Coefficient: Log P_{ow} = 1.06

13. DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded? Not a hazardous waste
If yes, the RCRA ID number is: Not applicable

OTHER DISPOSAL CONSIDERATIONS:

Disposal must comply with federal, state, and local disposal or discharge laws. R-134A is subject to U.S. Environmental Protection Agency Clean Air Act Regulations Section 608 in 40 CFR Part 82 regarding refrigerant recycling.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

US DOT HAZARD CLASS: US DOT PROPER SHIPPING NAME: 1,1,1,2-Tetrafluoroethane
US DOT HAZARD CLASS: 2.2
US DOT PACKING GROUP: Not applicable

US DOT ID NUMBER: UN3159

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: Listed on the TSCA inventory
OTHER TSCA ISSUES: None

SARA TITLE III / CERLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

INGREDIENT NAME	SARA / CERCLA RQ (lb.)	SARA EHS TPQ (lb.)
No ingredients listed in this section		

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: IMMEDIATE
PRESSURE

SARA 313 TOXIC CHEMICALS:

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

INGREDIENT NAME	COMMENT
No ingredients listed in this section	

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

INGREDIENT NAME	WEIGHT %	COMMENT
No ingredients listed in this section		

ADDITIONAL REGULATORY INFORMATION:

R-134A is subject to U.S. Environmental Protection Agency Clean Air Act Regulations at 40 CFR Part 82.

WARNING: DO NOT vent to the atmosphere. To comply with provisions of the U.S. Clean Air Act, any residual must be recovered. **Contains 1,1,1,2-Tetrafluoroethane (HFC-134a),** a greenhouse gas which may contribute to global warming.

WHMIS CLASSIFICATION (CANADA):

This product has been evaluated in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

FOREIGN INVENTORY STATUS:

Canada – Listed on DSL
EU - EINECS # 223770

16. OTHER INFORMATION

CURRENT ISSUE DATE: October, 2004
PREVIOUS ISSUE DATE: September, 2001

OTHER INFORMATION:

HMIS Classification: Health – 1, Flammability – 1, Reactivity – 0
NFPA Classification: Health – 2, Flammability – 1, Reactivity – 0
ANSI/ASHRAE 34 Safety Group – A1
UL Classified

Regulatory Standards:
1. OSHA regulations for compressed gases: 29 CFR 1910.101
2. DOT classification per 49 CFR 172.101

Toxicity information per PAFT Testing

17. DISCLAIMER

National Refrigerants, Inc. believes that the information and recommendations contained herein (including data and statements are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other methods of use of the product and of the information referred to herein are beyond the control of National Refrigerants. National Refrigerants expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

MATERIAL SAFETY DATA SHEET

Effective Date: February 26, 2002

1. PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Polyvinyl Chloride Pipe
Chemical Name: Mixture
Synonyms: Not applicable
Chemical Family: Mixture of Polyvinyl Chloride Homopolymer
Formula: Mixture, see below.

COMPANY ADDRESS:

North American Pipe Corporation, wholly-owned subsidiary of
Westlake Group of Companies
2801 Post Oak Blvd.
Houston, TX 77056

EMERGENCY CONTACT: **CALL 1-217-324-6515**
THESE NUMBERS ARE AVAILABLE DAYS, NIGHTS, WEEKENDS, AND HOLIDAYS, EXCEPT ON DECEMBER 24 TO 26.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component CAS	Number	% By Weight	OSHA PEL-TWA mg/m ^{3} mg/m	ACGIH TLV-TWA ^{3}
Polyvinyl chloride resin (chloroethene homopolymer), treated as nuisance particulate	9002-86-2	95	5 (respirable fraction) 15 (total dust)	3 (respirable particulate) 10 (total particulate)
Calcium carbonate	1317-65-3	3-4	5 (respirable fraction) 15 (total dust)	10 (total particulate)
Waxes NE		1-2	NE	2 (as Paraffin Wax Fume)
Titanium dioxide	13463-67-7	<1	15 (total dust)	10 (total particulate)

NE = Not Established

3. HAZARDS IDENTIFICATION

This product is non-hazardous under Hazard Communication Standard 29 CFR 1910.1200.

HAZARD RATINGS Degree of hazard (0 = low, 4 = extreme)

National Fire Protection Association — Health: 1 Flammability: 1 Reactivity: 0 Specific Hazard: None

Hazardous Materials Identification System — Health: 1 Flammability: 1 Reactivity: 0

This Material Safety Data Sheet is offered solely for your information, consideration, and investigation. Westlake Group of Companies provides no warranties, either express or implied, and assumes no responsibility for the accuracy or completeness of the data contained herein.

MATERIAL SAFETY DATA SHEET

4. FIRST AID MEASURES

EYE CONTACT:	Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Consult a physician immediately.
SKIN CONTACT:	Cool skin rapidly if contacted with molten polymer. Obtain medical attention for thermal burns or skin irritation.
INHALATION:	The product is not expected to present an inhalation hazard , unless mechanically chipped or pulverized or if melted during fire. If dust or fumes are inhaled, remove to fresh air.
SWALLOWING:	No adverse health effects expected from ingestion.

5. FIRE FIGHTING MEASURES

Flash Point: Not applicable
Lower Explosive Limit: Not applicable
Upper Explosive Limit: Not applicable
Autoignition Temp: 849 °F (470 °C)

EXTINGUISHING MEDIA:	Use water spray, dry chemical, or foam.
SPECIAL FIRE FIGHTING PROCEDURES:	Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing if involved in fire.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	PVC homopolymers are self-extinguishing plastic materials. They will burn in the presence of other materials that support combustion and will generate hydrogen chloride, phosgene, benzene, carbon monoxide, carbon dioxide, aromatic and aliphatic hydrocarbons, and other gases.

6. STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Collect scrap for reprocessing, or for landfill in compliance with local regulations.

7. HANDLING/STORAGE

Use any methods that keep dust to a minimum. General storage procedures are acceptable.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

EYE PROTECTION:	Safety glasses are required if there is a possibility of getting dust particles in eyes. Have eye wash equipment nearby.
SKIN PROTECTION:	None required.

MATERIAL SAFETY DATA SHEET

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION (CONT'D)

VENTILATION: Local exhaust ventilation is recommended to control airborne dust.

RESPIRATORY PROTECTION: If dust or fumes exist, use a NIOSH/MSHA approved respirator. At unknown concentrations and for fire fighting, use self-contained breathing apparatus (SCBA). Always use respirators in accordance with instructions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form:	Solid	
Boiling Point:	Not	available
Heat Deflection Temperature:		168 °F (76 °C)
Vapor Density:	Not	applicable
Vapor Pressure (mm Hg):		Not applicable
Evaporation Rate:		Not applicable
% Volatile by Volume:	Not	applicable
Density:	Not	determined
Specific Gravity:	1.42	
Solubility in Water (20 °C):	Insoluble	
Melting Point:	Not	available
Viscosity:		Not applicable
Odor:	Plastic,	resin odor
Appearance:	Blue,	Green, Purple, Light Gray, or White plastic pipe
pH:	Not	applicable

10. STABILITY/REACTIVITY

Stability: Stable under normal storage conditions.

CONDITIONS TO AVOID: None known.

INCOMPATIBLE MATERIALS: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride, benzene, carbon monoxide, carbon dioxide, aromatic and aliphatic hydrocarbons, and other gases could be released in fire.

POLYMERIZATION: Hazardous polymerization not expected.

11. TOXICOLOGICAL INFORMATION

No toxicological data were found for this product. The effects reported are those anticipated based on the components of this product.

POTENTIAL ROUTES OF EXPOSURE: Inhalation of dust is the most likely route of exposure to this product.

SIGNS, SYMPTOMS, AND Exposure to high concentrations of dust of this product will cause irritation

MATERIAL SAFETY DATA SHEET

11. TOXICOLOGICAL INFORMATION (CONT'D)

TOXIC EFFECTS OF OVEREXPOSURE: of the respiratory tract with cough, difficulty breathing, dryness of the throat, or eye irritation.

ANIMAL TOXICITY DATA:

Component	Inhalation LC_{50}	Dermal LD_{50} (mg/kg)	Oral LD_{50} (mg/kg)
PVC homopolymer	No data found.	No data found.	No data found.
Calcium carbonate	No data found.	No data found.	No data found.
Titanium dioxide	No data found.	No data found.	No data found.

REPRODUCTIVE EFFECTS: No data were found regarding reproductive effects in humans or animals for any component of this product.

MUTAGENICITY DATA: No mutagenicity data were found for any component of this product.

DESIGNATION AS POTENTIAL CARCINOGEN: IARC designates PVC homopolymer and titanium dioxide as Group 3, "not classifiable as to its carcinogenicity in humans."

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: No data were found regarding this issue.

INTERACTIONS WITH CHEMICALS THAT ENHANCE TOXICITY: No data were found regarding this issue.

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12. ECOLOGICAL INFORMATION No data were found regarding adverse ecological impacts of this product.

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13. DISPOSAL CONSIDERATIONS Disposal should conform to federal, state, and local regulations. If hazardous according to 40 CFR part 261.31 or 32, or possesses characteristics of 40 CFR 261 Subpart C, dispose in a facility meeting the requirements of 40 CFR 264 or 265. If non-hazardous, dispose in a facility meeting the requirements of 40 CFR 257. Before attempting cleanup, refer to hazard information and personal protection information in other sections of this MSDS. If waste is determined to be hazardous, use licensed hazardous waste transporter and disposal facility.

RCRA Status of Unused Material: If discarded in unaltered form, should be tested in accordance to 40CFR 261 Subpart C and disposed as specified above.

MATERIAL SAFETY DATA SHEET

14. TRANSPORTATION INFORMATION

U.S.D.O.T. SHIPPING NAME, ID NO, HAZARD CLASS: Not Regulated (also, Canada via rail and truck.)

15. REGULATORY INFORMATION

SARA 313 LISTING:	This product does not contain any substance subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.
SARA 312 HAZARD CLASS:	Not applicable.
SARA EXTREMELY HAZARDOUS SUBSTANCES:	Not applicable.
EPA HAZARDOUS SUBSTANCES LIST: (40 CFR 302.4):	Not hazardous.
CA PROPOSITION 65:	This product does not contain any substance listed in the State of California Safe Drinking Water and Toxic Enforcement Act of 1986, as updated (February 23, 2001).
PENN. RIGHT-TO-KNOW:	All required components are identified.
N.J. RIGHT-TO-KNOW:	All required components are identified.
MASS. RIGHT-TO-KNOW:	All required components are identified.
TSCA INVENTORY STATUS:	All components of this product are listed on the TSCA Inventory.
CANADIAN WHMIS CLASS:	Not applicable.

16. OTHER INFORMATION

REVISIONS:	Entire MSDS reviewed February 26, 2002.
PREPARED BY:	Tetra Tech EM, Inc., using standard references and information provided and directed by Westlake Group of Companies.

FACTS faxed AST! SM

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 70

Hercules Purple PVC Primer

HERCULES© MATERIAL SAFETY INFORMATION SERVICE

Date Prepared: 3/24/1994 **Last Reviewed:** 1/26/2009

Meets OSHA 29 CFR 1910.1200

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL TWA	ACGIH TLV TWA	Other Limits	Upper Bound Limit if SARA Reportable
Tetrahydrofuran (109-99-9)	200PPM	200PPM	N/A	- -
Methyl Ethyl Ketone (78-93-3)	200PPM	200PPM	N/A	- -
Cyclohexanone (108-94-1)	50PPM	20PPM	N/A	- -
Acetone (CAS67-64-1)	1000 PPM	500PPM	750 STEL	

HMIS Hazard Rating: Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F): 133 Based on first boiling component-Acetone

Specific Gravity (H2O = 1): 0.820 ± 0.03

Vapor Density (Air = 1): 2.0 to 2.5

Vapor Pressure (mm Hg): 400 @ 104° F Based on first boiling component-Acetone

Melting Point (° F): N/A

Evaporation Rate: (Butyl Acetate = 1) 7-11

Solubility in Water: 50% to 75%

VOC Level (g/l): 510

Appearance And Color: Purple Liquid

Odor: Ethereal & Acetone-like

Section 4 - Fire And Explosion Hazard Data

Flash Point: 0° to -4.0° F (TCC) (Based on acetone)

Flammable Limits: LEL: 2% UEL: 13.0%

Extinguishing Media: Foam/Dry chemical/CO2

Special Firefighting Procedures:
Handle as flammable liquid. Wear self-contained breathing apparatus & chemical goggles. Water may be ineffective, but should be used to keep fire-exposed containers cool.

Unusual Fire And Explosion Hazards:
Vapor is heavier than air and travels considerable distance to sources of ignition and flashback. On long standing may cause peroxides which may cause violent reaction especially upon evaporation to dryness.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep in closed containers away from sparks & open flame.

Incompatability (Materials To Avoid): Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide, Sodium & Potassium Hydroxides.

Hazardous Decomposition: Carbon dioxide and carbon monoxide are formed. Irritating Peroxide fumes are formed when heated to decomposition.

Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids.

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

Corrosive to eyes and skin irritant. Severe overexposure can cause headache, dizziness and narcosis. May cause dermatosis and dermatitis with prolonged repeated contact.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: No effects expected. INHALATION: Will cause irritation of mucous membranes, nose, eyes, & throat; coughing, difficulty of breathing. Exposure to high vapor concentration may cause headache, dizziness, nausea, narcosis. SKIN CONTACT: Prolonged skin contact causes common solvent defatting effect. EYE CONTACT: Vapors slightly uncomfortable. Splashes irritating. Will cause painful burning or stinging of eyes & lids, watering of eyes and conjunctiva.

Medical Conditions Generally Aggravated By Exposure:

No data found

Emergency And First Aid Procedures:

'NGESTION: DO NOT INDUCE VOMITING. If conscious, dilute by giving 2 glasses of water. Call a physician ,mmediately. INHALATION: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth resuscitation. If breathing is difficult, give oxygen. Call a physician. SKIN CONTACT: Wash affected area with soapy water. Remove contaminated clothing. EYE CONTACT: Immediately flush eyes with plenty of water for 15 minutes. Consult a physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Eliminate sources of ignition. Absorb with sand or inert absorbing material. Dispose of with solid waste in accordance with all regulations. Flush spill area with water. Avoid flushing into confined areas.

Waste Disposal Method:

Incinerate in accordance with federal, state and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool, well-ventilated area. Keep away from open flame and sources of ignition.

Other Precautions:

Use normal good personal hygiene.

Section 8 - Control Measures:

Respiratory Protection:

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation: **Local Exhaust** As required

Mechanical All ventilating devices must be located so they do not provide a source of ignition.

Special When using cements in an area of limited ventilation, use a ventilation device such as a fan or air mover to maintain a safe air concentration.

Other: N/A

Gloves: PVA gloves

Eye Protection: Chemical Safety goggles.

Other Protective Clothing: Apron, boots, eye bath, safety shower

Work/Hygienic Practices Wash thoroughly after handling. Avoid ingestion of the cements. do not eat or drink when using cements or in the vicinity where such cements are being used.

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Trade Name:	CARLON ELECTRICAL PRODUCTS ALL WEATHER QUICKSET CLEAR CEMENT
Product Numbers:	VC9981P, VC9982, VC9983, VC9984, VC9983, VC9985C, VC9983C
Product Use:	Cement for PVC Plastic Pipe
Formula:	PVC Resin in Solvent Solution
Synonyms:	PVC Plastic Pipe Cement
Firm Name & Mailing Address:	CARLON ELECTRICAL PRODUCTS c/o OATEY CO. 4700 West 160th Street P.O. Box 35906 Cleveland, Ohio 44135, U.S.A. http://www.oatey.com
Oatey Phone Number:	(216) 267-7100 or (800) 321-9532
Emergency Phone Numbers:	For Emergency First Aid call 1-303-623-5716 COLLECT. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared By:	Corporate Director - Safety and Environmental Compliance
Preparation Date:	August 25, 2005

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS:	%wt/wt:	CAS NUMBER:	ACGIH TLV TWA:	OSHA PEL TWA:	OTHER:
Tetrahydrofuran	40 - 55%	109-99-9	50 ppm(skin) 100 ppm STEL	200 ppm	25 ppm (Mfg)
PVC Resin (Non-hazardous)	12 - 24%	9002-86-2	10 mg/m3	15 mg/m3	None
Acetone	10 - 25%	67-64-1	500 ppm 750 ppm STEL	1000 ppm	None
Cyclohexanone	10 - 20%	108-94-1	20 ppm(skin) 50 ppm STEL	50 ppm	None
Amorphous Fumed Silica (Non-hazardous)	1 - 5%	112945-52-5	10 mg/m3	None Established	None
OSHA Hazard Classification:		Flammable, irritant, organ effects			

SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview:
Clear liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

SECTION 4 FIRST AID MEASURES

CALL 1-303-623-5716 COLLECT

Skin:	Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with Oatey Plumber's Hand Cleaner or baby oil.
Eyes:	If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.
Inhalation:	If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.
Ingestion:	**DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

SECTION 5 FIRE FIGHTING MEASURES

Flashpoint / Method:	0 - 5 Degrees F. (-18 - -15 Degrees C / PMCC
Flammability:	LEL = 1.8 % Volume, UEL = 11.8 % Volume
Extinguishing Media:	Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Special Fire Fighting Procedure:	Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Unusual Fire and Explosion Hazards:	Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
Hazardous Decomposition Products:	Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures:	Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for disposal information.

SECTION 7 HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage:	Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other:	"Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation:	Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.
Respiratory Protection:	For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.
Skin Protection:	Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

SECTION 8 (Continued)

Eye Protection:	Safety glasses with sideshields or safety goggles.
Other:	Eye wash and safety shower should be available.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	151 Degrees F / 66 Degrees C
Melting Point:	Not Applicable
Vapor Pressure:	145 mmHg @ 20 Degrees C
Vapor Density:	(Air = 1) 2.5
Volatile Components:	81-85%
Solubility In Water:	Negligible
pH:	Not Applicable
Specific Gravity:	0.94 +/- 0.01 @ 20 Degrees C
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0
Appearance:	Clear Liquid
Odor:	Ether-Like
Will Dissolve In:	Tetrahydrofuran
Material Is:	Liquid

SECTION 10 STABILITY AND REACTIVITY

Stability:	Stable.
Conditions To Avoid:	Avoid heat, sparks, flames and other sources of ignition.
Hazardous Decomposition Products:	Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Incompatibility/ Materials To Avoid:	Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.
Hazardous Polymerization:	Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Inhalation:	Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.
Skin:	May cause irritation with redness, itching and pain. Cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.
Eye:	Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.
Ingestion:	Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.
Chronic Toxicity:	Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.
Toxicity Data:	Acetone: Oral rat LD50: 5,800 mg/kg Inhalation rat LC50: 50,100 mg/m3/8 hours
	Cyclohexanone: Oral rat LD50: 1,620 mg/kg Inhalation rat LC50: 8,000 ppm/4 hours Skin rabbit LD50: 1 mL/kg
	Tetrahydrofuran: Oral rat LD50: 1,650 mg/kg Inhalation rat LC50: 21,000 ppm/3 hours

SECTION 11 (Continued)

Sensitization:	None of the components are known to cause sensitization.
Carcinogenicity:	None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran as "A3," Confirmed Animal Carcinogens with Unknown Relevance to Humans.
Mutagenicity:	Cyclohexanone has been positive in bacterial and mammalian assays. Acetone and tetrahydrofuran are generally thought not to be mutagenic.
Reproductive Toxicity:	Cyclohexanone has been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran have been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.
Medical Conditions Aggravated By Exposure:	Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

SECTION 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.
Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.
Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.
Acetone: 96 hour LC50 for fish is greater than 100 mg/L.

VOC Information:	This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.
VOC Level:	450 g/l per SCAQMD Test Method 316A.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with current local, state and federal regulations.
RCRA Hazardous Waste Number: U002, U057, U213
EPA Hazardous Waste ID Number: D001, F003
EPA Hazard Waste Class: Ignitable Waste.

SECTION 14 TRANSPORT INFORMATION

DOT	Less than 1 Liter (0.3 gal)	Greater than 1 Liter (0.3 gal)
Proper Shipping Name:	Consumer Commodity	Adhesives
Hazard Class/Packing Group:	ORM-D	3, PGII
UN/NA Number:	None	UN1133
Hazard Labels:	None	Flammable Liquid
IMDG		
Proper Shipping Name:	Adhesives	Adhesives
Hazard Class/Packing Group:	3, II	3, II
UN Number:	UN1133	UN1133
Label:	None (Limited Quantities are excepted from labeling)	Class 3 (Flammable Liquid)

2004 North American Emergency Response Guidebook Number: 127 or 128

SECTION 15 REGULATORY INFORMATION

Hazard Category for Section 311/312:	Acute Health, Chronic Health, Flammable
Section 302 Extremely Hazardous Substances (TPQ):	This product does not contain chemicals regulated under SARA Section 302.
Section 313 Toxic Chemicals:	This product contains no chemicals subject to SARA Title III Section 313 Reporting requirements.
CERCLA 103 Reportable Quantity:	Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (55% maximum) of 1,000 lbs, is 1,818 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
California Proposition 65:	This product contains trace amounts of chemicals known to the State of to cause cancer. Under normal Use conditions, exposure to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. Oatey strongly encourages the use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 to minimize exposure to these chemicals.
TSCA Inventory:	All of the components of this product are listed on the TSCA inventory.
Canadian WHIMS Classification:	Class B, Division 2; Class D, Division 2, Subdivision B. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16

NFPA and HMIS:

NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None

HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

Material Safety Data Sheet
May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910 1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY *(as Used on Label and List)*

ABS Plastic Pipe

Note: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's name
Rocky Mountain Colby Pipe

Address *(Number, Street, City, State and ZIP Code)*
5125 Race Court Unit –B

Denver, Colorado 80216

Emergency Telephone Number
(800)424-9300 (Chemtrec)

Telephone Number for Information
303-296-3711

Date Prepared
04/03/2007

Signature of Preparer *(optional)*

Section II—Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Non toxic/ non hazardous solid				

Section III—Physical/Chemical Characteristics

Boiling Point	**N/A**	Specific Gravity (H_20 = 1)	**1.05**
Vapor Pressure (mm Hg)	**N/A**	Melting Point	**400° F**
Vapor Density (AIR = 1)	**N/A**	Evaporation Rate (Butyl Acetate = 1)	**Solid**

Solubility in Water **N/A**

Appearance and Odor **Black plastic pipe**

Section IV—Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Flash Ignition Temp (ASTM D 1929) 730° F	**N/A**	**N/A**	**N/A**

Extinguishing Media

Water spray, Foam CO 2, Dry chemical

Special Fire Fighting Procedures

In confined spaces, self cont-contained breathing apparatus should be worn

ABS is a combustible thermoplastic material

Unusual Fire and Explosion Hazards

Produces carbon monoxide and other toxic gases when burned

Section V—Reactivity Data

Stability			Conditions to Avoid
N/A	Unstable		**Avoid overheating**
	Stable		

Incompatibility *(Materials to Avoid)* **N/A**

Hazardous Decomposition or Byproducts

Emits Co, Co 2, and various hydrocarbons with combustion

Hazardous Polymerization **N/A**			Conditions to Avoid **N/A**
	May Occur		
	Will Not Occur		

Section VI—Health Hazard Data

Route(s) of Entry **N/A** Inhalation? Skin? Ingestion?

Health Hazards *(Acute and Chronic)* ***Avoid inhalation of combustion products***

Carcinogenicity **N/A** NTP? IARC Monographs? OSHA Regulated?

Signs and Symptoms of Exposure **Combustion products may cause eye, nose and throat irritation**

Medical Conditions
Generally Aggravated by Exposure N/A

Emergency and First Aid Procedures **Remove individual from fire area. Call physician**

Section VII—Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled **N/A**

Waste Disposal Method **Sanitary landfill**

Precautions to Be Taken in Handling and Storing **Water Sprinkler warehouse recommended**

Other Precautions **None**

Section VIII—Control Measures

Respiratory Protection *(Specify Type)* ***N/A***

Ventilation	Local Exhaust ***N/A***	Special ***N/A***
	Mechanical *(General)* ***N/A***	Other ***N/A***

Protective Gloves ***None*** Eye Protection ***None***

Other Protective Clothing or Equipment ***None***

Work/Hygienic Practices ***None***

FACTS Faxed FAST! SM

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 64
Hercules ABS Cement

HERCULES® MATERIAL SAFETY INFORMATION SERVICE

Date Prepared: 2/1/1990 **Last Reviewed:** 9/8/2009

Meets OSHA 29 CFR 1910.1200

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Methyl Ethyl Ketone (78-93-3)	200PPM	200PPM	N/A	- -

HMIS Hazard Rating: Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
175.0 (Based on MEK)	0.860 ± 0.02	2.0 to 2.5	78 @ 68°F (Based on MEK)

Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level (g/l):
N/A	2.7	70% to 80%	400

Appearance And Color: Black Viscous Liquid **Odor:** Ethereal & Acetone-like

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
16.0° F (T.C.C.) (Based on MEK)		1.8%	11.5%

Extinguishing Media: Foam/Dry Chemical/Carbon Dioxide.

Special Firefighting Procedures:
Handle as flammable liquid. Wear self-contained breathing apparatus & chemical goggles. Water may be ineffective but should be used to keep fire exposed containers cool.

Unusual Fire And Explosion Hazards:
Vapor is heavier than air and travels considerable distance to source of ignition and flashback.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep in closed containers away from sparks & open flame.

Incompatability (Materials To Avoid): Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide, Sodium & Potassium Hydroxides.

Hazardous Decomposition: Carbon dioxide and carbon monoxide are formed. Irritating peroxide fumes formed when heated to decomposition.

Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids.

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

Corrosive to eyes & skin irritant. Severe overexposure can cause headache, dizziness and narcosis. May Cause dermatosis and dermatitis with prolonged repeated contact.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: May cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. INHALATION: Will cause irritation of mucous membranes, nose, eyes & throat coughing, difficulty of breathing. Exposure to high vapor concentration may cause headache, narcosis, SKIN CONTACT: Prolonged contact causes common solvent defatting effect. EYE CONTACT: Vapors slightly uncomfortable, splashes irritating. Will cause painful burning or stinging of eyes and lids, watering of eyes and inflammation of conjunctiva.

Medical Conditions Generally Aggravated By Exposure:

No data found.

Emergency And First Aid Procedures:

INGESTION: DO NOT INDUCE VOMITING. If conscious, dilute by giving two glasses of water. Call a physician immediately. INHALATION: Remove to fresh air, if not breathing; give artificial respiration preferably mouth to mouth. If breathing is difficult give oxygen. Call a physician. SKIN CONTACT: Wash affected skin area with soapy water. Remove contaminated clothing. EYE CONTACT: Immediately flush eyes with plenty of water for 15 minutes. Consult a physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Eliminate sources of ignition. Absorb with sand or inert absorbing material and dispose of with solid waste according to federal, state and local regulations. Flush spill area with water, avoid flushing into confined areas.

Waste Disposal Method:

Incinerate in accordance with the federal, state and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool place, well-ventilated area, Keep away from open flame and sources of ignition.

Other Precautions:

Use normal good personal hygiene.

Section 8 - Control Measures:

Respiratory Protection:

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation: **Local Exhaust** As required

Mechanical All ventilating devices must be located so they do not provide a source of ignition.

Special When using cements in an area of limited ventilation, use a ventilation device such as a fan or air mover to maintain a safe air concentration.

Other: N/A

Gloves: PVA gloves.

Eye Protection: Chemical safety goggles.

Other Protective Clothing: Apron, boots, eye bath, safety shower.

Work/Hygienic Practices Wash thoroughly after handling. Avoid ingestion of the cements. Do not eat or drink when using cements or in the vicinity where such cements are being used.

TRENTON PIPE NIPPLE COMPANY, LLC

P.O. Box 40 • Federalsburg, MD 21632

Telephone: (800) 257-9559 • Fax: (866) 706-5260

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTITY: Copper Pipe

SECTION I - PRODUCT INFORMATION

PRODUCT NAME:	Copper Pipe	MANUFACTURE'S NAME:
CHEMICAL NAME:	Copper -CDA 122, Phosphorus Deoxidized	Various
TDG NAME:	N.A.	DISTRIBUTOR:
PHYSICAL DESCRIPTION:	Shiny red colored metallic solid, it has no odor and is not soluable in water.	Trenton Pipe Nipple Company

SECTION II - HAZARDOUS INGREDIENTS

ELEMENT	CAS NO.	% RANGE	OSHA PEL (mg/M³)	ACGIH TLV (mg/M³)
Copper	7440-50-8	99.9	0.1 fume, 1 dust	0.2 fume, 1 dust
Phosphorus (Yellow)	7723-14-0	<0.1	0.1	0.1

SECTION III - PHYSICAL DATA

MELTING POINT: 1981°F

DENSITY: 8.96 gr/cm³

BOILING POINT: 4703°F

VAPOR PRESSURE: @1628°C 1.0

SECTION IV - FIRE & EXPLOSION HAZARDS

FLAMMABILITY:	NO
EXPLOSIVITY:	NO
Lower %	N.A.
Upper %	N.A.
FLASHPOINT:	N.A.

Means of Extinguishing:

None, not flammable.

Special Fire Fighting:

None when solid.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Do not use water on molten metal. Finely divided dust is flammable.

MATERIAL SAFETY DATA SHEET (continuation):

SECTION V - TOXICOLOGY & FIRST AID	**Copper Pipe**

EFFECTS OF OVEREXPOSURE: No adverse health effects when handling intact parts; wash hands before eating to prevent ingestion of minute amounts of toxic metal that may accumulate in the body.

INHALATION:	Dust may irritate nose and throat. If heated, copper and zinc fumes may cause metal fume fever, a delayed benign transient flu-like condition.
FIRST AID:	Remove from exposure to fresh air, thoroughly shower and change clothing.
INGESTION:	Rare in industry. Dust may irritate mouth and gastrointestinal tract.
FIRST AID:	Induce vomiting and seek medical assistances.
EYES:	Flush with clean water for thirty minutes.
SKIN:	Wash thoroughly with soap and water.

SECTION VI - REACTIVITY DATA

STABILITY: Copper is stable at room temperature.
CONDITIONS TO AVOID: Do not use copper pipe and fittings to transport corrosive liquids.
HAZARDOUS DECOMPOSITION PRODUCTS: Flammable hydrogen gas will evolve when copper is exposed to acid.
INCOMPATIBILITY: (Materials to avoid) Strong acids and bases. Explosive compounds formed in the presence of acetylene.

SECTION VII - PREVENTIVE MEASURES

VENTILATION:	Local exhaust ventilation is recommended when melting, brazing or grinding copper metal.
RESPIRATORY:	Wear appropriate NIOSH-MSHA approved respirators whenever workplace contamination exceeds applicable limits.
EYE PROTECTION:	Wear appropriate eye protection when melting, brazing, soldering, cutting or grinding copper metal.
HANDLING:	Do not eat or drink when handling this material. Use cotton work gloves to prevent transfer of metal to skin.
STORAGE:	Store away from corrosive chemicals such as acids.
SPILLS:	Solid metal does not pose any problems. Dust spills should be cleaned up avoiding dust generation. Collect and recycle to process. Wash down with water if in contact with acids.
DISPOSAL:	Recycle or dispose of material in accordance with government regulations.

OATEY -- 30011 OATEY 5 PASTE FLUX - FLUX FOR COPPER PIPE
MATERIAL SAFETY DATA SHEET
NSN: 685000F013124
Manufacturer's CAGE: 53472
Part No. Indicator: A
Part Number/Trade Name: 30011 OATEY 5 PASTE FLUX

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General Information

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Item Name: FLUX FOR COPPER PIPE
Company's Name: OATEY COMPANY
Company's Street: 4700 W 160TH ST
Company's P. O. Box: 35906
Company's City: CLEVELAND
Company's State: OH
Company's Country: US
Company's Zip Code: 44135-2632
Company's Emerg Ph #: 303-623-5716 COLLECT
Company's Info Ph #: 216-267-7100
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 001
Status: SE
Date MSDS Prepared: 18AUG94
Safety Data Review Date: 07MAR95
Preparer's Company: OATEY COMPANY
Preparer's St Or P. O. Box: 4700 W 160TH ST
Preparer's City: CLEVELAND
Preparer's State: OH
Preparer's Zip Code: 44135-2632
MSDS Serial Number: BJHDS

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Ingredients/Identity Information

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Proprietary: NO
Ingredient: PETROLATUM, GREASE *95-1*
Ingredient Sequence Number: 01
Percent: 65-75
NIOSH (RTECS) Number: 1000032PL
CAS Number: 8009-03-8

Proprietary: NO
Ingredient: ZINC CHLORIDE
Ingredient Sequence Number: 02
Percent: 20-25
NIOSH (RTECS) Number: ZH1400000
CAS Number: 7646-85-7
OSHA PEL: 1 MG/CUM
ACGIH TLV: 1 MG/CUM

Proprietary: NO
Ingredient: AMMONIUM CHLORIDE
Ingredient Sequence Number: 03
Percent: 1-5
NIOSH (RTECS) Number: BP4550000
CAS Number: 12125-02-9
OSHA PEL: 10 MG/CUM
ACGIH TLV: 10 MG/CUM

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Physical/Chemical Characteristics

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Appearance And Odor: YELLOW PASTE W/VERY LITTLE ODOR.
Boiling Point: 638.6F
Vapor Density (Air=1): >1
Solubility In Water: NEGLIGIBLE
Percent Volatiles By Volume: 7-10

==========
Fire and Explosion Hazard Data
==========
Flash Point: 540F
Extinguishing Media: SMALL: DRY CHEMICAL, CO2, WATER, FOAM.
Special Fire Fighting Proc: EVACUATE AREA.
==========
Reactivity Data
==========
Stability: YES
Cond To Avoid (Stability): HEAT
Hazardous Decomp Products: HYDROCARBONS, HYDROGEN CHLORIDE, CO, CO2, SMOKE.
Hazardous Poly Occur: NO
==========
Health Hazard Data
==========
Route Of Entry - Inhalation: YES
Route Of Entry - Skin: YES
Route Of Entry - Ingestion: YES
IRRITATION, BURNS, DERMATITIS. EYES: IRRITATION, BURNS, CORNEAL DAMAGE. INGESTION: BURNS OF MOUTH & THROAT, KIDNEY DISEASE, DEATH.
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: NONE
Signs/Symptoms Of Overexp: IRRITATION, BURNS, FEVER, CHILLS, MUSCULAR PAIN, VOMITING, SWEATING, DIARRHEA, STRICTURES, SHOCK.
Emergency/First Aid Proc: SKIN: WASH THOROUGHLY W/SOAP & WATER. EYES: MOVE TO FRESH AIR & IRRIGATE EYES W/WATER FOR 15 MINS. INHALATION: MOVE TO FRESH AIR. GIVE CPR/OXYGEN IF NEEDED. KEEP QUIET & WARM. INGESTION: DRINK WATER. AVOID ALCOHOLIC BEVERAGES. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. OBTAIN MEDICAL ATTENTION IN ALL CASES.
==========
Precautions for Safe Handling and Use
==========
Steps If Matl Released/Spill: VENTILATE AREA. SAFETLY STOP LEAK. TAKE UP W/SAND, EARTH/OTHER ABSORBING MATERIAL & PLACE IN A CLEAN, DRY LEAK-PROOF CONTAINER.
Waste Disposal Method: DISPOSE OF IAW/FEDERAL, STATE & LOCAL REGULATIONS. CORROSIVE D002
Precautions-Handling/Storing: DON'T STORE NEAR HEAT.
==========
Control Measures
==========
Respiratory Protection: IF SOLDERING IN AN ENCLOSED AREA, USE NIOSH APPROVED CANISTER.
Ventilation: GENERAL MECHANIC: USE IN CLOSED AREAS. LOCAL EXHAUST: OPEN DOORS & WINDOWS.
Protective Gloves: RUBBER
Eye Protection: SAFETY GLASSES W/SIDE SHIELDS
Work Hygienic Practices: NORMAL GOOD HYGIENE PRACTICES.
==========
Transportation Data
==========
==========
Disposal Data
==========
==========
Label Data
==========
Label Required: YES
Label Status: G
Common Name: OATEY 5 PASTE FLUX
Special Hazard Precautions: EYES: IRRITATION, BURNS, & CORNEAL DAMAGE.

SKIN: IRRITATION, BURNS, & DERMATITIS. INHALATION: RESPIRATORY IRRITATION, FEVER, CHILLS, MUSCULAR PAIN, VOMITING, & SWEATING. INGESTION: BURNS OF MOUTH & THROAT, DIARRHEA, STRICTURES, KIDNEY DISEASE, SHOCK, CIRCULATORY IRRITATION, BURNS, & DERMATITIS. INHALATION: RESPIRATORY IRRIATION, FEVER, CHILLS, MUSCULLLAR PAIN, VOMITING, & SWEATING. INGESTION: BURNS OF MOUTH & THROAT, DIARRHEA, STRICTURES, KIDNEY DISEASE, SHOCK, CIRCULATROY COLLAPSE, & DEATH.
Label Name: OATEY COMPANY
Label Street: 4700 W 160TH STREET
Label City: ST. CLEVELAND
Label State: OH
Label Zip Code: 44135
Label Emergency Number: (303) 623-5716

MATERIAL SAFETY DATA SHEET

Product name: HIT–RE 500 SD

Description: High strength epoxy adhesive for anchoring in concrete and rebar doweling. Part A is the large tube; Part B is the small tube.

Supplier: Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121

Emergency # (Chem-Trec.): 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)

INGREDIENTS AND EXPOSURE LIMITS

Ingredients:		CAS Number:	TLV:	PEL:	STEL:
Part A:	Bisphenol A epoxy resin	25068-38-6	NE	NE	NE
	Bisphenol F epoxy resin	28064-14-4	NE	NE	NE
	Quartz sand	14808-60-7	0.025 mg/m^3 (R)	$\frac{10\ mg/m^3}{\%\ SiO_2 + 2}$	NE
	Alkylglycidyl ether	19136100-5012 *	NE	NE	NE
	Diglycidyl ether	19136100-5013 *	NE	NE	NE
	Siloxanes & silicones	67762-90-7	NE	NE	NE
Part B:	m-xylene diamine	01477-55-0	C: 0.1 / S	C: 0.1 / S	NE
	Aliphatic polyamine	19136100-5014 *	NE	NE	NE
	Quartz sand	14808-60-7	0.025 mg/m^3 (R)	$\frac{10\ mg/m^3}{\%\ SiO_2 + 2}$	NE
	Aluminum oxide	01344-28-1	10 mg/m^3	15 mg/m^3 (T)	NE
	Cement	65997-16-2	NE	NE	NE
	Siloxanes & silicones	67762-90-7	NE	NE	NE

Abbreviations: * = indicates New Jersey Trade Secret Registry Number. **C** = Ceiling. **NE** = None Established. **R** =dust "respirable" fraction. **S** = Skin exposure, including the mucous membranes, eyes, and skin. **T** = "total" dust. **TLV** = ACGIH Threshold Limit Values. **PEL** = OSHA Permissible Exposure Limits. **STEL** = ACGIH/OSHA Short Term Exposure Limit

PHYSICAL DATA

Appearance and Odor:	A: Gray; B: red / paste. Amine-like odor.	**VOC Content:**	4.0 g/l
Boiling Point:	Approx. 212° F	**Vapor Pressure:**	Not determined.
Vapor Density: (air = 1)	Not determined.	**Odor Threshold:**	Not determined
Evaporation Rate:	Not applicable.	**Solubility in Water:**	Insoluble .
Specific Gravity:	1.5	**pH:**	11 (Part B with 1:1 water)

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	> 200° F	**Flammable Limits:**	Not applicable.

Extinguishing Media: CO_2, Dry Chemical, Foam, Water Spray.

Special Fire Fighting Procedures: A self-contained breathing apparatus should be worn when fighting fires involving chemicals.

Unusual Fire and Explosion Hazards: None known. Thermal decomposition products can be formed including CO_X, NO_X, water and carbon.

REACTIVITY DATA

Stability:	Stable.	**Hazardous Polymerization:**	Will not occur.

Incompatibility: Strong acids and oxidizing agents.

Decomposition Products: Thermal decomposition can yield CO_X, NO_X, water and carbon.

Conditions to Avoid: Avoid temperature extremes that could shorten the shelf-life of this product. (See handling and storage requirements for recommended storage temperatures).

HEALTH HAZARD DATA

Known Hazards: **Part A:** Eye and skin irritation. Possible skin sensitizer. **Part B:** Corrosive

Signs and Symptoms of Exposure: **Part A:** Can be irritating to the eyes and skin, Can cause skin sensitization with some individuals (itching, redness, swelling). **Part B:** Can cause eye and skin burns. Vapors can be irritating. If

	swallowed, can cause burns.
Routes of Exposure:	Contact. Inhalation.
Carcinogenicity:	IARC classifies crystalline silica (quartz sand) as a Group I carcinogen based upon evidence among workers in industries where there has been long-term and chronic exposure (via inhalation) to silica dust; e.g. mining, quarry, stone crushing, refractory brick and pottery workers. This product does not pose a dust hazard; therefore, this classification is not relevant.
Medical Conditions Aggravated by Exposure:	Eye, skin, and respiratory conditions.

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	Flush **immediately** with water for at least 15 minutes. Contact a Physician if symptoms occur.
Skin:	Wash **immediately** with soap and water. Launder contaminated clothing before reuse. Seek medical attention if any symptoms occur.
Inhalation:	If symptoms occur, move to fresh air. Call a physician if symptoms persist.
Ingestion:	Do not induce vomiting unless directed by a physician. Contact a Physician immediately.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	General (natural or mechanically induced fresh air movements).
Eye Protection:	Chemical Goggles recommended.
Skin Protection:	Impermeable gloves recommended.
Respiratory Protection:	None normally required. Where ventilation is inadequate to control vapors, use a NIOSH-approved respirator with organic vapor cartridges.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	For industrial use only. Keep away from children. Use with adequate ventilation. Avoid contact with the eyes or skin. Practice good hygiene; i.e. wash after using and before eating or smoking. Store in a cool dry area between 41° and 77° F (5 - 25° C). Keep from freezing.
Spill Procedures:	Take up with an absorbent material and place in a container for proper disposal.

REGULATORY INFORMATION

Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
HMIS Codes:	Health 3, Flammability 1, Reactivity 0, PPE B
DOT Shipping Name:	Consumer commodity, ORM-D
IATA / ICAO Shipping Name:	Amines, solid, corrosive, n.o.s. (M-xylenediamine), Class 8, UN3259, PG II
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product does not contain any toxic chemicals which are subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).
EPA Waste Code(s):	Not regulated by EPA as a hazardous waste
Waste Disposal Methods:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

CONTACTS

Customer Service:	1 800 879 8000	**Technical Service:**	1 800 879 8000
Health / Safety:	1 800 879 6000 Jerry Metcalf (x1003704)		
Emergency # (Chem-Trec):	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)		

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.

MATERIAL SAFETY DATA SHEET

Product name: Safety Boosters

Description: 22, 25, and 27 caliber blank cartridges. Also called shots, loads, power loads, safety cartridges.

Supplier: Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121

Emergency # (Chem-Trec.): 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (Other countries)

For: ANDREWS & THORNLEY INC
951 CALIFORNIA BLVD
NAPA, CA 94559-2220

INGREDIENTS AND EXPOSURE LIMITS

Ingredients:	CAS Number:	TLV:	PEL:	STEL:
Nitroglycerin	00055-63-0	0.46 mg/m^3 (S)	NE	0.1 mg/m^3 (S)
Nitrocellulose	09004-70-0	NE	NE	NE
Lead styphnate	15245-44-0	0.15 mg/m^3	0.05 mg/m^3	NE
Barium nitrate	10022-31-8	0.5 mg/m^3	0.5 mg/m^3	NE
Tetracene	00109-27-3	NE	NE	NE

Abbreviations: **PEL** = OSHA Permissible Exposure Limit. **TLV** = ACGIH Threshold Limit Value. **STEL** = Short Term Exposure Limit. **NE** = None Established. **NA** = Not Applicable. **(S)** indicates exposure should be controlled for the cutaneous routes including the mucous membranes, eyes, and skin. Airborne exposures as well as direct contact must be considered.

PHYSICAL DATA

Appearance:	Blank brass cartridges.	**Odor:**	None.
Vapor Density: (air = 1)	Not applicable.	**Vapor Pressure:**	Not applicable.
Boiling Point:	Not applicable.	**VOC Content:**	Not applicable.
Evaporation Rate:	Not applicable.	**Solubility in Water:**	Not applicable.
Specific Gravity:	Not applicable.	**pH:**	Not applicable.

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Not applicable.	**Flammable Limits:**	Not applicable.
Extinguishing Media:	Water.		
Special Fire Fighting Procedures:	Flood area with water or keep cartridges cool with water spray.		
Unusual Fire and Explosion Hazards:	Cartridges can blast if exposed to temperatures > 160°C. Mass detonation will not occur.		

REACTIVITY DATA

Hazardous Polymerization:	Will not occur.	**Stability:**	Stable.
Incompatibility:	Strong acids and oxidizing agents.		
Decomposition Products:	Oxides of nitrogen, oxides of carbon, acrid fumes and lead oxide.		
Conditions to Avoid:	Acids, excessive heat, crushing, and electrical currents.		

HEALTH HAZARD DATA

Known Hazards: OSHA has established an action level of 0.03 mg/m^3 for lead. Exposures that exceed recommended limits for lead may be possible under certain conditions such as excessive firing with little air movement and/or firing in small enclosed work areas.

Signs and Symptoms of Exposure: Excessive exposure to gases might cause irritation to the eyes, skin, and respiratory system. Adverse health effects are not expected from acute exposure to fumes and gases; however, adequate ventilation, personal protective equipment, and/or good personal hygiene practices are essential to keep exposure to a minimum.

Routes of Exposure: Dermal. Inhalation.

Carcinogenicity:	Inorganic lead compounds are classified by IARC as Group 2B (animal) carcinogens. The lead compounds tested in lab animals were almost all soluble salts. Metallic lead and lead oxide have not been tested adequately. A study by Goyer and Rhyne (1973) concluded that "there is no evidence that lead produces cancer in man".
Medical Conditions Aggravated by Exposure:	None anticipated.

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	If irritation occurs, flush with plenty of water. Consult a physician if symptoms persist.
Skin:	Practice good hygiene; i.e. wash with soap and water after using and before meals.
Inhalation:	Move victim to fresh air. Get medical attention if symptoms persist.
Ingestion:	Get immediate medical attention.
Other:	Seek prompt medical attention if physical injury occurs from pins, rivets, debris, etc. For bleeding wounds, place a clean cloth or similar absorbent material on the wound and apply firm pressure. Elevate the wound and transport immediately to a medical facility.

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	General (i.e., natural or mechanically induced fresh air movements that maintain vapor concentrations below recommended exposure limits).
Eye Protection:	Safety glasses with side-shields, as a minimum. Safety goggles recommended.
Skin Protection:	Cleaning powder actuated tools can result in some exposure to lead compounds. Cloth gloves are recommended, otherwise, wash hands thoroughly when finished and before eating or smoking.
Respiratory Protection:	Not normally required. Where air movement is inadequate to maintain exposure below recommended levels, wear a high efficiency particulate respirator.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Store in a cool dry place. Do not crush or drop. Keep away from excessive heat (such as extremely hot surfaces and flames), electrical current, strong acids and oxidizers. NFPA 495 requires 15 feet separation (or 1-hour firewall) from flammable liquids, flammable solids, and oxidizers. For industrial use only. Keep out of reach of children. Use with adequate ventilation. Practice good hygiene; i.e. wash after using and before eating or smoking.
Other Precautions::	Use only in powder actuated tools designed to handle these boosters. Construction industry employees must be properly trained as prescribed by OSHA regulations 29 CFR 1926.302 (e). All employees should be familiar with the safe operating procedures and requirements for powder operated tools as described in ANSI A10.3 and OSHA 29 CFR 1910.243 (d).

REGULATORY INFORMATION

DOT Shipping Name:	Consumer commodity, ORM-D **EPA Waste Code(s):** D003
Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
HMIS Codes:	Health 1, Flammability 1, Reactivity 3, PPE B (Glasses, Gloves)
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product contains < 1% lead styphnate (CAS No. 15245-44-0), < 0.1% barium nitrate (CAS No. 10022-31-8), and 5 - 11% nitroglycerin (CAS No. 55-63-0) which are subject to the reporting according to Section 313 of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.
Waste Disposal Methods:	Misfires should be stored in a closed container until disposal or as otherwise required by local, state, and federal safety, health and environmental regulations. The recommended disposal method is in a burner specifically designed to destroy ammunition.
EPA Waste Code(s):	D008

CONTACTS

Customer Service:	1 800 879 8000	**Technical Service:**	1 800 879 8000
Health / Safety:	1 800 879 6000 Jerry Metcalf (x6704)		
Emergency # (Chem-Trec):	1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (other countries)		

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.

MATERIAL SAFETY DATA SHEET

Product name: HIT-HY 20

Description: Methacrylate resin and hardener. Part A is in the large tube; Part B is in the small one.

Supplier: Hilti, Inc. P.O. Box 21148, Tulsa, OK 74121

Emergency # (Chem-Trec.): 1 800 424 9300 (USA, PR, Virgin Islands, Canada); 001 703 527 3887 (Other countries)

For: ANDREWS & THORNLEY INC
951 CALIFORNIA BLVD
NAPA, CA 94559-2220

INGREDIENTS AND EXPOSURE LIMITS

Ingredients:		CAS Number:	TLV:	PEL:	STEL:
Part A:	Resin	NJTSRN: 19136100-5001	NE	NE	NE
	Bonding agent	NJTSRN: 19136100-5003	10 mg/m^3 (N)	NE	NE
	Methacrylate ester	NJTSRN: 19136100-5005	NE	NE	NE
	Fly ash	068131-74-8	10 mg/m^3(N)	NE	NE
	Butyric acid ester	NJTSRN: 19136100-5002	NE	NE	NE
	Synthetic amorphous silica	067762-90-7	2 mg/m^3	NE	NE
Part B:	Fly ash	068131-74-8	10 mg/m^3(N)	NE	NE
	Dibenzoyl peroxide	000094-36-0	5 mg/m^3	5 mg/m^3	NE
	Amorphous silica	007631-86-9	10 mg/m^3(N)	20 mppcf	NE
	Dipropylene glycol	025265-71-8	NE	NE	NE
	Polyethylene	009002-88-4	NE	NE	NE
	Water	007732-18-5	NE	NE	NE

Abbreviations: **NJ TSRN** indicates New Jersey Trade Secret Registry Number. **N indicates "as nuisance dust".** **PEL** = OSHA Permissible Exposure Limit. **TLV** = ACGIH Threshold Limit Value. **STEL** = Short Term Exposure Limit. **NE** = None Established. **NA** = Not Applicable. Mppcf = million particles per cubic foot.

PHYSICAL DATA

Appearance and Odor:	Gray paste. Ester-like odor.	**VOC Content:**	37.1 g/l
Boiling Point:	Not determined.	**Vapor Pressure:**	Not determined.
Vapor Density:	Not determined.	**Odor Threshold:**	Not determined.
Evaporation Rate:	Not determined.	**Solubility in Water:**	Part B is soluble.
Specific Gravity:	Part A: 1.2 ; Part B:0.9	**pH:**	5 (Part B)

FIRE AND EXPLOSION HAZARD DATA

Flash Point:	> 200° F	**Flammable Limits:**	Not applicable.
Extinguishing Media:	Carbon Dioxide, Dry Chemical, Foam, Water.		
Special Fire Fighting Procedures:	Soak cartons to help prevent the spread of fire. Use a self-contained breathing apparatus when fighting fires involving chemicals.		
Unusual Fire and Explosion Hazards:	None known. Thermal decomposition products can be formed.		

REACTIVITY DATA

Stability:	Dibenzoyl peroxide decomposes (non-violently) at 150° F. Ignition does not occur due to the >5% water content.
Hazardous Polymerization:	Will not occur.
Incompatibility:	Strong acids, peroxides, and amines. Do not store in direct sunlight.
Hazardous Decomposition Products:	Thermal decomposition can yield CO and CO_2.
Conditions to Avoid:	Temperature extremes will shorten product shelf life; i.e. below freezing / above 100°F.

HEALTH HAZARD DATA

Known Hazards:	Can cause irritation. Possible sensitization.
Signs and Symptoms of Exposure:	**Eyes:** Can cause irritation. Corneal injury is not expected. **Skin:** Prolonged and repeated contact can cause irritation. An allergic skin reaction (e.g. rash, itching, reddening) can occur with some individuals.; e.g. itching, redness, swelling, etc. **Inhalation:** No ill effects expected. Irritation is possible. **Ingestion:** Not a likely route of exposure. Considered to have low acute oral toxicity.
Routes of Exposure:	Dermal.
Carcinogenicity:	No ingredients are classified as a carcinogen by IARC, NTP or OSHA.
Medical Conditions Aggravated by Exposure:	Eye, skin, and respiratory conditions.

EMERGENCY AND FIRST AID PROCEDURES

Eyes:	Flush with plenty of water. Call a physician if symptoms occur.
Skin:	Wash with soap and water. Launder contaminated clothing before reuse.
Inhalation:	Move victim to fresh air. Call a physician if symptoms persist.
Ingestion:	Seek medical attention. Do not induce vomiting unless directed by a physician. Never give anything by mouth to an unconscious person.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure. If sensitization occurs, future contact with the material should be avoided.

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation:	General (natural or mechanically induced fresh air movements).
Eye Protection:	Safety glasses with side shields recommended.
Skin Protection:	Impermeable (neoprene or rubber) gloves recommended.
Respiratory Protection:	None normally required. Where ventilation is inadequate to control vapors, use a NIOSH-approved respirator with organic vapor cartridges. Never enter a confined space without an appropriate air-supplied respirator.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling and Storing Precautions:	Store in a cool, dry area preferably between 40°and 77° F . Do not store in direct sunlight. Keep away from open flames, heat sources and sparks. Avoid prolonged or repeated contact. Use with adequate ventilation. Always wash thoroughly after handling chemical products. For industrial use only. Keep out of reach of children.
Spill Procedures:	Cover with an absorbent material and place in a salvage container for proper disposal. If possible, mix parts A and B and allow product to cure (harden).

REGULATORY INFORMATION

Hazard Communication:	This MSDS has been prepared in accordance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
HMIS Codes:	Health 1, Flammability 1, Reactivity 1, PPE B
DOT Shipping Name:	Not regulated.
IATA/ICAO Shipping Name:	Not regulated.
TSCA Inventory Status:	Chemical components listed on TSCA inventory.
SARA Title III, Section 313:	This product contains 10 - 15% Benzoyl peroxide (CAS # 94-36-0) which is subject to reporting under Section 313 of SARA Title III (40 CFR Part 372).
EPA Waste Code(s):	Not regulated by EPA as a hazardous waste
Waste Disposal Methods:	Consult with regulatory agencies or your corporate personnel for disposal methods that comply with local, state, and federal safety, health and environmental regulations.

CONTACTS

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