



MATERIAL SAFETY DATA SHEET

MSDS No. M0093

Effective Date: 10/07/2004

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: RIGIDIZER™ W
Manufacturer/Supplier: Unifrax Corporation
2351 Whirlpool St.
Niagara Falls, NY 14305-2413
Product Stewardship Information Hotline
1-800-322-2293 (Monday - Friday 8:00 a.m. - 4:30 p.m. EST)
For additional MSDSs, visit our web page, <http://www.unifrax.com>, or call Unifrax Customer Service at (716) 278-3872
CHEMTREC Assist: CHEMTREC will provide assistance for chemical emergencies. Call 1-800-424-9300

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>COMPONENTS</u>	<u>CAS NUMBER</u>	<u>% BY WEIGHT</u>
Water	7732-18-5	64-72
Silica (amorphous)	7631-86-9	27-35
Oxirane, methyl-, block polymer**	9003-11-6	1-5
Oxirane, methyl-, polymer**	9003-11-6	1-5
**May contain traces of the following:		
Ethylene oxide	75-21-8	Trace
Propylene oxide	75-56-9	Trace
1,4-dioxane	123-91-1	Trace

(See Section 8 "Exposure Controls / Personal Protection" for exposure guidelines)

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION! MAY BE HARMFUL IF SWALLOWED. MAY CAUSE SKIN, EYE, AND RESPIRATORY TRACT IRRITATION.

HAZARD RATINGS

HAZARDOUS MATERIALS INFORMATION SYSTEM (HMIS) RATINGS:

Health: 1 Flammability: 0 Reactivity: 0 Personal Protection Index: X

POTENTIAL HEALTH EFFECTS

TARGET ORGANS: Skin, eyes, and lungs.

INHALATION: If inhaled in sufficient quantity, may cause respiratory tract irritation. Symptoms may include scratchiness of the nose or throat, cough or chest discomfort.

EYE CONTACT: Slightly to moderately irritating. Contact may cause irritation with redness and pain.

SKIN CONTACT: Slightly to moderately irritating. Prolonged contact with dust may cause drying of the skin.

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INGESTION: If ingested in sufficient quantity, may cause gastrointestinal disturbances. Symptoms may include nausea, vomiting, or abdominal pain.

CHRONIC EFFECTS: None identified.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Removal of used product, sanding, scraping, or otherwise destroying the integrity of the dried product may result in the release of silica dust. Pre-existing medical conditions, including dermatitis, asthma or chronic lung disease may be aggravated by exposure to silica dust; individuals who are atopic (with a history of allergies) may experience greater amounts of skin and respiratory irritation.

HAZARD CLASSIFICATION:

The **International Agency for Research on Cancer (IARC)** has determined that amorphous silica is not classifiable as to its carcinogenicity to humans (Group 3).

IARC classified respirable crystalline silica, a possible byproduct of amorphous silica devitrification following sustained, high-temperature (>1800°F) use, as a substance known to be carcinogenic to humans (Group 1).

4. FIRST AID MEASURES

FIRST AID PROCEDURES

INHALATION: If respiratory tract irritation occurs, relocate individual. Get medical attention if irritation persists. See Section 8 for additional measures to reduce or eliminate exposure.

EYE CONTACT: If eyes become irritated, flush immediately with large amounts of lukewarm water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Do not rub eyes. Get medical attention if irritation persists.

SKIN CONTACT: If skin becomes irritated, do not rub or scratch exposed skin. Wash area of contact thoroughly with soap and water. Using a skin cream or lotion after washing may be helpful. Change into clean clothing.

INGESTION: If gastrointestinal irritation occurs, relocate individual to a dust free environment. Seek medical attention if symptoms persist.

NOTES TO PHYSICIANS: None.

5. FIRE FIGHTING MEASURES

NFPA Codes: **Flammability: 0** **Health: 1** **Reactivity: 0** **Special: 0**

NFPA Unusual Hazards: None

Flammable Properties: None

Flash Point: None

Hazardous Decomposition Products: Decomposition products may include carbon monoxide and carbon dioxide.

Unusual Fire and Explosion Hazard: None

Extinguishing Media: Use extinguishing media suitable for type of surrounding fire.

6. ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal.

7. HANDLING AND STORAGE

HANDLING AND STORAGE

Normal conditions of use and application are not expected to release respirable particulates. Removal of used product, sanding, scraping, or otherwise destroying the integrity of the dried product may result in the release of particulates. During such operations, appropriate respiratory protection should be provided as discussed below and/or in Section 8 under Respiratory Protection.

Minimize airborne dusts by avoiding the unnecessary disturbance of materials.

Removal and clean up of after service product may result in exposure to a crystalline phase silica (See Section 16 for more details). Depending on the product's use, other contaminants may also be present. During removal, the exposed material should be frequently misted with water to minimize airborne dust. A surfactant may be added to the water to improve the wetting process. Use only enough water to wet the insulation. Do not allow water to accumulate on floors.

Clean Up

Dust suppressing cleaning methods such as wet sweeping or vacuuming should be used to clean the work area. If vacuuming is used the vacuum must be equipped with a HEPA filter. Compressed air or dry sweeping should not be used for cleaning. Dust suppressing compounds may be used to clean up light dust.

For additional information regarding the use and handling of this product, contact the Unifrax Corporation Product Stewardship Information Line at 1-800-322-2293 (See Section 16).

EMPTY CONTAINERS: Product packaging may contain residue. Do not reuse.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES

COMPONENTS	OSHA PEL
Water	None established.
Silica (amorphous)	20 mppcf or 80 mg/m ³ / % SiO ₂
Oxirane, methyl-, block polymer**	None established.
Oxirane, methyl-, polymer**	None established.
**May contain traces of the following:	
Ethylene oxide	1 ppm
Propylene oxide	20 ppm (50 mg/m ³)
1,4-dioxane	25 ppm (90 mg/m ³) (skin)

OTHER OCCUPATIONAL EXPOSURE LEVELS (OEL)

Non-regulatory OEL examples include: Water -- None established. Silica (amorphous) -- 10 mg/m³ inhalable particulate, 3 mg/m³ respirable particulate. Oxirane, methyl-, block polymer -- None established. Oxirane, methyl-, polymer -- None established. Ethylene oxide -- 1 ppm TWA. Propylene oxide -- 20 ppm TWA. 1,4-dioxane -- 25 ppm TWA. Ethylene oxide -- 1 ppm TWA.

ENGINEERING CONTROLS

Dust suppressing control technologies such as local exhaust ventilation, point of generation dust collection, down draft work stations, emission controlling tool designs, and materials handling equipment are effective means of minimizing airborne particulate emissions. For additional information, contact the Unifrax Corporation Product Stewardship Information Line at 1-800-322-2293 (See Section 16).

PERSONAL PROTECTION EQUIPMENT

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EYE PROTECTION: Wear safety glasses or chemical goggles to prevent eye contact. Do not wear contact lenses unless chemical goggles are also worn. Do not touch eyes with soiled body parts or materials. Have eye washing facilities readily available where eye contact can occur.

SKIN PROTECTION: Wear gloves, head coverings and full body clothing as necessary to prevent skin irritation. Washable or disposable clothing may be used. If possible, do not take unwashed clothing home. Work clothes should be washed separately from other clothing and the washing machine rinsed thoroughly following use. Inform the launderer of the proper procedures. Store work clothes and street clothes separately.

RESPIRATORY PROTECTION: When engineering and/or administrative controls are insufficient, the use of appropriate respiratory protection, pursuant to the requirements of OSHA 1910.134 AND 29 CFR 1926.103, is recommended. The evaluation of workplace hazards and the identification of appropriate respiratory protection is best performed, on a case by case basis, by a qualified Industrial Hygienist.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR AND APPEARANCE:	Odorless Blue liquid
CHEMICAL FAMILY:	Colloidal silica
BOILING POINT:	212 ^o F @ 760 mm Hg ASTM D-86
SPECIFIC GRAVITY:	1.18-1.30 @ 77 ^o F ASTM D-1298
DENSITY:	10.75-10.83 lbs/gal.
pH (NEAT):	10.1-10.5
VISCOSITY:	30 cps maximum
FLASH POINT:	None

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable under conditions of normal use.
INCOMPATIBILITY:	Soluble in hydrofluoric acid, phosphoric acid, and concentrated alkali.
CONDITIONS TO AVOID:	None.
HAZARDOUS DECOMPOSITION PRODUCTS:	Decomposition products may include carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

The International Agency for Research on Cancer (IARC), has concluded that amorphous silica is "not classifiable as to its carcinogenicity to humans (Group 3)" based on "inadequate evidence in humans for the carcinogenicity of amorphous silica" and "inadequate evidence in experimental animals for the carcinogenicity of synthetic amorphous silica" (IARC Monograph 68, June 1997, p. 210-211).

EPIDEMIOLOGY:

IARC noted that "very little epidemiological evidence was available" for amorphous silica. In evaluating the results of three community-based case-control studies, IARC concluded that "no association was detected for mesothelioma with biogenic amorphous silica fibres." (IARC Monograph 68, June 1997, p. 208).

TOXICOLOGY:

A food-grade micronized synthetic amorphous silica was tested by oral administration to mice and rats. No increased incidence of tumors was seen. In another study in rats, using intrapleural implantation of two different preparations of synthetic amorphous silica, no increased incidence of tumors were observed (IARC Monograph 68, June 1997, p. 209).

To obtain more health and safety related information, please call the toll free telephone number for the Unifrax Corporation Product Stewardship Program found in Section 16 - Other Information.

12. ECOLOGICAL INFORMATION

No ecological concerns have been identified.

13. DISPOSAL CONSIDERATIONS

DISPOSAL: This product is not classified as a hazardous waste according to Federal regulations (40 CFR 261). Check local, regional, state or provincial regulations for applicable requirements for disposal. Any processing, use, alteration or chemical additions to the product, as purchased, may alter the disposal requirements. Under Federal regulations, it is the waste generator's responsibility to properly characterize a waste material, to determine if it is a "hazardous" waste.

EMPTY CONTAINERS: Product packaging may contain product residue. Do not reuse.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

Hazard Class:	Not Regulated	United Nations (UN) Number:	Not Applicable
Labels:	Not Applicable	North America (NA) Number:	Not Applicable
Placards:	Not Applicable	Bill of Lading:	Product Name

15. REGULATORY INFORMATION

Key statutory and regulatory classifications or listings for the product, as manufactured, which may impact product storage, use, handling or disposal:

UNITED STATES REGULATIONS

Comprehensive Environmental Response

Compensation and Liability Act of 1980 (CERCLA):

None of the constituents are regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA 40 CFR 302):

Clean Air Act (CAA):

Substances regulated as hazardous air pollutants under Section 112 of the Clean Air Act Amendments of 1990:

COMPONENTS

CAS NUMBER

% BY WEIGHT

Ethylene oxide	75-21-8	Trace
Propylene oxide	75-56-9	Trace
1,4-dioxane	123-91-1	Trace

Toxic Substances Control Act (TSCA):

All substances in this product are listed, as required, on the TSCA inventory.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Hazard Category:

Listed below are the hazard categories for the Superfund Amendments and Reauthorization Act (SARA) Section 311/312 (40 CFR 370):

Immediate Hazard: -- Fire Hazard: -- Reactivity Hazard: --

Delayed Hazard: X Pressure Hazard: --

SARA 313 Information:

Toxic chemical(s) subject to the annual reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313 (40 CFR 372):

COMPONENTS

CAS NUMBER

% BY WEIGHT

Ethylene oxide	75-21-8	Trace
Propylene oxide	75-56-9	Trace
1,4-dioxane	123-91-1	Trace

SARA 302/311/312 Information:

Extremely hazardous substances subject to the notification and inventory reporting requirements of the Superfund

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Amendments and Reauthorization Act (SARA) Section 302 (40 CFR 355) and Section 311/312 (40 CFR 370) respectively:

<u>COMPONENTS</u>	<u>CAS NUMBER</u>	<u>% BY WEIGHT</u>
Ethylene oxide	75-21-8	Trace
Propylene oxide	75-56-9	Trace
1,4-dioxane	123-91-1	Trace

STATE REGULATIONS:

California:

Substance(s) listed by the State of California on Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986:

<u>COMPONENTS</u>	<u>CAS NUMBER</u>	<u>% BY WEIGHT</u>
Ethylene oxide	75-21-8	Trace
Propylene oxide	75-56-9	Trace
1,4-dioxane	123-91-1	Trace

New Jersey:

Chemical(s) which are listed as a special health hazard substance as defined in New Jersey Worker and Community Right to Know Act, New Jersey Administrative Code, Title 8, Department of Health, Chapter 59, Subchapter 10:

<u>COMPONENTS</u>	<u>CAS NUMBER</u>	<u>% BY WEIGHT</u>
Ethylene oxide	75-21-8	Trace
Propylene oxide	75-56-9	Trace
1,4-dioxane	123-91-1	Trace

Pennsylvania:

Chemical(s) which are listed as a special health hazard substance as defined in Pennsylvania Right-to-Know Law, Section 3800:

<u>COMPONENTS</u>	<u>CAS NUMBER</u>	<u>% BY WEIGHT</u>
Ethylene oxide	75-21-8	Trace
Propylene oxide	75-56-9	Trace
1,4-dioxane	123-91-1	Trace

INTERNATIONAL REGULATIONS

Canada:

Canadian Workplace Hazardous Materials Information System (WHMIS):

The following Canadian Workplace Hazardous Materials Information System (WHMIS) categories apply to this product: Other Toxic Effects.

Canadian Environmental Protection Act (CEPA) - All substances in this product are listed, as required, on the Domestic Substance List (DSL)

16. OTHER INFORMATION

After-Service: Removal

The amorphous silica contained in this product may devitrify and form cristobalite (a form of crystalline silica) when used at temperatures above 1000°C for sustained periods. Chronic exposure to respirable crystalline silica may lead to lung disease. IARC has concluded that: "Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)." [IARC Monograph 68, June 1997, p. 210-211]. The Occupational Safety and Health Administration (OSHA) has adopted a permissible exposure limit (PEL) for respirable cristobalite at 0.05 mg/m³. When needed, the use of proper exposure controls and respiratory protection is recommended to reduce potential health risks and to ensure compliance with OSHA requirements. The evaluation of workplace hazards and the identification of appropriate respiratory protection is best performed, on a case by case basis, by a qualified Industrial Hygienist. For more detailed information regarding respirable crystalline silica, call the Product Stewardship Information Hotline (see below).

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Product Stewardship Program

The Unifrax Corporation has established a program to provide customers with up-to-date information regarding the proper use and handling of this product. If you would like more information, please call the Unifrax Corporation Product Stewardship Information Hotline at 1-800-322-2293.

Definitions:

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service

EPA: Environmental Protection Agency

HEPA: High Efficiency Particulate Air

HMIS: Hazardous Materials Information System

mg/m³: Milligrams per cubic meter of air

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

29 CFR 1910.134 & 1926.103: OSHA Respiratory Protection Standard

29 CFR 1910.1200 & 1926.59: OSHA Hazard Communication Standard

PEL: Permissible Exposure Limit

RCRA: Resource Conservation and Recovery Act

SARA: Superfund Amendments and Reauthorization Act

Title III: Emergency Planning and Community Right to Know Act

Section 302: Extremely Hazardous Substances

Section 304: Emergency Release

Section 311: MSDS/List of Chemicals and Hazardous Inventory

Section 312: Emergency and Hazardous Inventory

Section 313: Toxic Chemicals and Release Reporting

TLV: Threshold Limit Value (ACGIH)

TSCA: Toxic Substances Control Act

Revision Summary: Revised specific gravity range per specification. Replaces 10/5/2004 MSDS.

MSDS Prepared By: UNIFRAX HSEQ DEPARTMENT

DISCLAIMER

The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.



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