





# SAFETY DATA SHEET

## 1. Product and Company Identification

<b>PRODUCT NUMBER:</b>	2448	<b>COMPANY PHONE:</b>	1-800-241-8180
<b>PRODUCT NAME:</b>	FIRM GRIP PART A	<b>EMERGENCY TELEPHONE:</b>	1-800-241-8180
<b>PRODUCT DESCRIPTION:</b>	Three-Part Epoxy Skid-Resistant Floor Coating	<b>INFOTRAC:</b>	1-800-535-5053
<b>COMPANY INFORMATION:</b>	PRO CHEM, INC. 1475 Bluegrass Lakes Parkway Alpharetta, GA 30004		

## 2. Hazards Identification

<b>GHS CLASSIFICATION:</b> Skin Irritation: Category 2 Eye Irritation: Category 2A Skin Sensitization: Category 1 Chronic hazards to aquatic environment: Category 2	<b>SIGNAL WORD:</b> <b>WARNING</b>	<b>SYMBOL:</b>		
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### HAZARD STATEMENTS:

May cause an allergic skin reaction.  
Causes skin irritation.  
Causes serious eye irritation.  
Toxic to aquatic life with long-lasting effects.

### PRECAUTIONARY STATEMENTS:

Keep container tightly closed.  
If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.  
Read label before use.  
Avoid breathing dust/gas/mist/vapors/spray.  
Wash skin thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.  
Avoid release to the environment.  
Wear protective gloves/protective clothing/eye protection/face protection.  
IF ON SKIN: Wash with soap and water.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If skin irritation or a rash occurs: Get medical advice/attention.  
Take off contaminated clothing and wash before reuse.  
Collect spillage.  
**Storage:** Store locked up.  
**Disposal:** Dispose of contents and container as instructed in Section 13.

## 3. Composition / Information on Ingredients

CHEMICAL NAME	CAS	Concentration % by Weight
Bisphenol-a-(epichlorhydrin) and epoxy resin	25068-38-6	80-90
(2-ethylhexyl) oxy (methy) oxirane	2461-15-6	10-20

## 4. First Aid Measures

### EMERGENCY OVERVIEW

**EYES:** Seek medical attention. Drench the affected area immediately with plenty of water. Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing.

**SKIN:** Wash hands and exposed skin with soap and plenty of water. Remove contaminated clothing. Seek medical attention if irritation, rash, or other adverse occur.

**INHALATION:**  
Move exposed to fresh air. Give artificial respiration, if necessary. If breathing is difficult, give oxygen. Loosen clothing and place exposed in a comfortable position.

**INGESTION:**  
Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention.

**MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED:**  
Shortness of breath, headache, nausea, dizziness, irritation- all routes of exposure. Acute pneumoconiosis or silicosis from overwhelming exposure to crystalline silica dust has occurred. Lungs may be affected by repeated or prolonged exposure to fibers, resulting in fibrosis. This substance is possibly carcinogenic to humans. Persons with impaired respiratory function may be more susceptible to the effects of this substance. Smoking can increase the risk of lung injury.

**INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:**  
If seeking medical attention, provide SDS document to physician. Physician should treat symptomatically.

## 5. Fire-Fighting Measures

### SUITABLE FIRE EXTINGUISHING MEDIA:

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

### UNSUITABLE FIRE EXTINGUISHING MEDIA:

None.

### SPECIFIC FIRE-FIGHTING METHODS:

Avoid inhaling gases, fumes, dust, mist, and aerosols. Avoid contact with skin, eyes, and clothing.

### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

## 6. Accidental Release Measures

### PERSONAL PRECAUTIONS:

Ensure adequate ventilation and use appropriate personal protection equipment. Avoid breathing mist, vapors, and spray. Avoid contact with skin, eyes, and clothing. Keep unnecessary and unprotected personnel from entering the involved area. Ensure that air-handling systems are operational.

### ENVIRONMENTAL PRECAUTIONS:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

### METHODS & MATERIALS FOR CONTAINMENT & CLEAN UP:

Soak up with inert absorbent material and dispose of as hazardous waste. Wear protective eyewear, gloves, and clothing. Refer to Section 8. Always obey local regulations. If necessary, use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable, closed containers for disposal.

### REFERENCE TO OTHER SECTIONS:

For more information on exposed controls, personal protection and disposal, review data in Section 8 and Section 13 of the SDS.

## 7. Handling and Storage

### SAFE HANDLING:

Ensure adequate ventilation of workplace and storage areas. Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substance. AVOID USE OF ELECTRIC BAND HEATERS (failures of such heaters have been reported to cause drums of liquid epoxy resin to explode and catch fire).

### SAFE STORAGE & INCOMPATIBILITIES:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials. Recommended storage temperature: 10-35°C (50-95°F).

## 8. Exposure Controls / Personal Protection

### CONTROL PARAMETERS:

OSHA/PEL: Not established.

### RECOMMENDED MONITORING:

If this product contains ingredients with exposure limits, personal workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessary to use respiratory equipment. Reference can be made of European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents for the determination of hazardous substance.

### ENGINEERING CONTROLS:

Emergency eyewash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mist below the applicable workplace exposure limits indicated above. (Occupational Exposure-OELS).

### PERSONAL PROTECTIVE EQUIPMENT:



**EYE PROTECTION:** Face shield (8-inch minimum) with tightly fitting safety goggles are appropriate eyewear. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU)

**SKIN PROTECTION:** Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer service. Avoid skin contact with used gloves. Wear protective clothing.

**RESPIRATORY PROTECTION:** Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator type N100 (US) or type P3 (EN143) respirator cartridges as a backup to engineering controls. When necessary, use NIOSH approved breathing equipment.

**GENERAL HYGIENIC MEASURES:** Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before re-wearing wash contaminated clothing.

## 9. Physical & Chemical Properties

<b>Appearance:</b>		<b>Explosive Limit – lower (%):</b>	Not determined.
<b>Physical State/Color:</b>	Light yellow.	<b>Explosive Limit – upper (%):</b>	Not determined.
<b>Odor:</b>	Slight epoxy odor.	<b>Vapor Pressure @20°:</b>	Not determined.
<b>Odor Threshold:</b>	Not determined.	<b>Vapor Density:</b>	Not determined.
<b>pH:</b>	App neutral (1:1 in water)	<b>Relative Density:</b>	1.13
<b>Melting/Freezing Point:</b>	Not determined.	<b>Solubility:</b>	Insoluble in water.
<b>Boiling Point/Range:</b>	>260° C (500°F)	<b>Auto-Ignition Temperature:</b>	Not determined.
<b>Partition Coeff (n-octanol/water):</b>	Not determined.	<b>Flash Point (closed cup):</b>	252°C (486°F) (PMCC)

## 10. Stability & Reactivity Information

### REACTIVITY:

Nonreactive under normal conditions.

### CHEMICAL STABILITY:

Stable under normal conditions. Upon prolonged storage the material may crystallize which is reversible condition: crystallized material can be liquefied back by heating slowly to 50°C for 6-24 hours.

### POSSIBLE HAZARDOUS REACTIONS:

Masses of more than one-pound (0.5 kg) product plus an aliphatic amine will cause irreversible polymerization with considerable heat build-up. Material will polymerize in contact with Sodium hydroxide.

### INCOMPATIBLE MATERIALS:

Acids, bases, oxidizing agents, hydrogen fluoride, acetylene, and ammonia.

### CONDITIONS TO AVOID:

Avoid elevated temperatures, potentially violent decomposition can occur above 350°C.

### HAZARDOUS DECOMPOSITION PRODUCTS:

25068-38-6: Strong oxidizing, acids, amines, and bases.

## 11. Toxicological Information

### ACUTE TOXICITY:

Oral: 25068-38-6 LD50 Oral-rat->5000 mg/kg  
Dermal: 2461-15-6 LD50 Oral-rabbit-20,000 mg/kg  
Inhalation: low volatility: not to be significant route of exposure.

### CHRONIC TOXICITY:

Inhalation: May cause respiratory irritation.

### SKIN CORROSION IRRITATION:

(guinea pig) Causes allergic skin reactions 1408-60-7

### SERIOUS EYE DAMAGE/IRRITATION:

(rabbit) causes serious eye irritation, corneal injury is not likely.

### RESPIRATORY OR SKIN SENSITIZATION:

May cause skin sensitization in some individuals.

### CARCINOGENIC INFORMATION:

N/A, Not listed by IARC, NTP, OSHA

### REPRODUCTIVE TOXICITY:

No additional information.

### STOT (single and repeated exposure):

2461-15-6: Inhalation - may cause respiratory irritation.

### ADDITIONAL TOXICOLOGICAL INFORMATION:

No additional information.

## 12. Ecological Information

### ECOTOXICITY:

2461-15-6: LC50-Carassius(goldfish)-14 mg/l-24 h

### PERSISTENCE AND DEGRADABILITY:

25068-38-6: Result: According to the results of test of biodegradability this product is not readily biodegradable. 1217-11-7: long term degradation products may arise.

### BIOACCUMULATIVE POTENTIAL:

BCF=31, Log Pow=3 (low potential to bioaccumulate in aquatic organisms).

### MOBILITY IN SOIL:

No additional information.

### OTHER ADVERSE EFFECTS:

No additional information.

## 13. Disposal Consideration

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as usual product. Product or containers must not be disposed together with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

## 14. Transportation Information

**US DOT:** Not regulated.

### UN NUMBER:

**ADR,AND,DOT,IMDG,IATA:** 3082

### LIMITED QUANTITY :

None.

### Bulk:

RQ (if applicable): none  
Proper shipping name: Environmentally  
Hazardous substance, liquid, n.o.s.  
Hazardous substance, liquid, n.o.s.  
(reaction product: bisphenol-A-  
(epichlorhydrin) and epoxy resin(number  
Average molecular weight <=700)  
Hazard Class: 9  
Packing Group: III

### Non Bulk

RQ (if applicable): none  
Proper shipping name: Environmentally  
Hazardous substance, liquid, n.o.s.  
Hazardous substance, liquid, n.o.s.  
(reaction product: bisphenol-A-  
(epichlorhydrin) and epoxy resin(number  
Average molecular weight <=700)  
Hazard class: 9  
Packing Group: III

<b>Bulk:</b> EmS No: F-A, S-F Marine Pollutant(if applicable): yes	<b>Non Bulk</b>  Marine Pollutant (if applicable): yes
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**15. Regulatory Information**

**US FEDERAL REGULATIONS:**  
**SARA 311/312 (Specific toxic chemical listings):** Acute health hazard.  
**SARA 313 (Specific toxic chemical listings):** None of the ingredients are listed.  
**RCRA (hazardous waste code):** None of the ingredients are listed.  
**TSCA (Toxic Substances Control Act):** All ingredients are listed.  
**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):** None of the ingredients are listed.

**PROPOSITION 65 (California):**  
**Chemicals known to cause cancer:** None of the ingredients are listed.  
**Chemical known to cause reproductive toxicity for females:** None of the ingredients are listed.  
**Chemicals known to cause reproductive toxicity for males:** None of the ingredients are listed.  
**Chemicals known to cause developmental toxicity:** None of the ingredients are listed.

**CANADA:**  
**Canadian Domestic Substances List (DSL):** None of the ingredients are listed.

**16. Other Information**

**DISCLAIMER:**  
To the best of our knowledge, information contained herein is accurate. However, there is no assumption of liability for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazard, which exists. The information contained in this SDS was obtained from current and reliable sources; however, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of the manufacturer, the manufacturer will not be responsible for loss, injury, or expense arising out of the products improper use. No warranty, expressed or inferred, regarding the product described in this SDS shall be created or inferred by any statement in this SDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product, which may not be covered by this SDS. The user is responsible for full compliance.



# SAFETY DATA SHEET

## 1. Product and Company Identification

<b>PRODUCT NUMBER:</b>	2448	<b>COMPANY PHONE:</b>	1-800-241-8180
<b>PRODUCT NAME:</b>	FIRM GRIP PART B	<b>EMERGENCY TELEPHONE:</b>	1-800-241-8180
<b>PRODUCT DESCRIPTION:</b>	Three-Part Epoxy Skid-Resistant Floor Coating	<b>INFOTRAC:</b>	1-800-535-5053
<b>COMPANY INFORMATION:</b>	PRO CHEM, INC. 1475 Bluegrass Lakes Parkway Alpharetta, GA 30004		

## 2. Hazards Identification

<b>GHS CLASSIFICATION:</b> Skin corrosion/irritation, category 2 Eye irritation, category 2 Skin sensitization, category 1 Specific target organ toxicity following single exposure, category 1 Acute toxicity(oral, dermal, inhalation), category 1 Reproductive toxicity, category 2 Chronic hazards to the aquatic environment, category 2	<b>SIGNAL WORD:</b> <b>DANGER</b>	<b>SYMBOL:</b>				
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### HAZARD STATEMENTS:

Harmful if swallowed.  
Causes skin burns and eye damage.  
Causes serious eye damage.  
May cause an allergic skin irritation.  
May cause respiratory irritation.  
Suspected of damaging fertility or the unborn child.

### PRECAUTIONARY STATEMENTS:

Keep container tightly closed.  
If medical advice is needed, have product container or label at hand.  
Keep out reach of children.  
Read label before use.  
Avoid breathing dust/gas/mist/vapors/spray.  
Wash skin thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.  
Avoid release to the environment.  
Wear protective gloves/protective clothing/eye protective/face protection.  
IF ON SKIN: Wash with soap and water.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF INHALED: Remove victim to fresh air and keep at rest in a comfortable for breathing.  
If skin irritation or a rash occurs. Get medical advice/attention.  
Take off contaminated clothing and wash before reuse.  
Collect spillage.  
**Storage:** Store locked up.  
Store in a well-ventilated place. Keep container tightly closed.  
**Disposal:** Dispose of contents and container as instructed in Section 13.

## 3. Composition / Information on Ingredients

CHEMICAL NAME	CAS	Concentration % by Weight
Hydrous magnesium silicate	14807-96-6	30-35
Titanium dioxide	13463-67-7	15-20
4,4'-methylenebis (cyclohexylamine)	1761-71-3	18-23
Nonyphenol	84852-15-3	3-6
bisphenol-A-(epichlorhydrin)and epoxy resin	25068-38-6	2-3
Iron(II,III) oxide	1317-61-9	<2
Silica amorphous, fumed, cryst,-free	112945-52-5	<1
Benzyl alcohol	100-51-6	15-20

## 4. First Aid Measures

### EMERGENCY OVERVIEW

**EYES:** Seek medical attention. Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing.

**SKIN:** Wash hands and exposed skin with soap and plenty of water. Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists. Wash away any material which may have contacted the body with copious amounts of water or soap.

**INHALATION:**  
Move exposed to fresh air. Give artificial respiration, if necessary. If breathing is difficult, give oxygen. Loosen clothing and place exposed in a

comfortable position.

**INGESTION:**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention.

**MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED:**

Shortness of breath, headache, nausea, dizziness, irritation-all routes of exposure. Acute pneumoconiosis or silicosis from overwhelming exposure to crystalline silica dust has occurred. Lungs may be affected by repeated or prolonged exposure to fibers, resulting in fibrosis. This substance is possible carcinogenic to humans. Persons with impaired respiratory function may be more susceptible to the effects of this substance. Smoking can increase the risk of lung injury.

**INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:**

If seeking medical attention, provide SDS document to physician. Physician should treat symptomatically.

**5. Fire-Fighting Measures**

**SUITABLE FIRE EXTINGUISHING MEDIA:**

Dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition. If large quantities of combustibles are involved, use water in flooding quantities as spray and fog. Use water spray to knock down vapors.

**UNSUITABLE FIRE EXTINGUISHING MEDIA:**

For safety reasons unsuitable extinguishing agents: Do not use water on material itself; water or foam may cause frothing.

**SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:**

Avoid inhaling gases, fumes, dust, mist, and aerosols. Avoid contact with skin, eyes, and clothing.

**SPECIFIC FIRE-FIGHTING METHODS:**

If material not on fire and not involved in fire: keep sparks, flames, and other sources of ignition away. Keep material out of water sources and sewers. Build dikes to contain flow as necessary. Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing. Move product containers away from fire. 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.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:**

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

**6. Accidental Release Measures**

**PERSONAL PRECAUTIONS:**

Water spill: Neutralize with agricultural lime (CaO), crushed limestone (CaCO<sub>3</sub>) or sodium bicarbonate (NaHCO<sub>3</sub>). If dissolved, in region of 10 ppm or greater concentration, apply activated carbon at ten times the spilled amount. Land spill: Dig a pit, pond, lagoon, holding area (should be sealed with an impermeable flexible membrane liner) to contain liquid or solid material. Dike surface flow using soil, sand bags, foamed polyurethane, or foamed concrete. Absorb bulk liquid with fly ash or cement powder. Neutralize as noted for water spill. Ensure adequate ventilation. Ensure that air-handling systems are operational.

**ENVIRONMENTAL PRECAUTIONS:**

Should not be released into environment. Prevent from reaching drains, sewer, or waterway. Collect contaminated soil for characterization per Section 13.

**METHODS & MATERIALS FOR CONTAINMENT & CLEAN UP:**

Sweep up and shovel. Soak up with inert absorbent material and dispose of as hazardous waste. Wear protective eyewear, gloves, and clothing. Personal protection: P2 filter respirator for harmful particles. 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 surface with compressed air). Collect solids in powder form using vacuum with HEPA filter. Do not handle broken packages unless wearing appropriate chemical protective equipment. Wash away any material which may have contacted the body with copious amounts of water and soap. Refer to Section 8. Always obey local regulations. If necessary, use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal. Sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**REFERENCE TO OTHER SECTIONS:**

None.

**7. Handling and Storage**

**SAFE HANDLING:**

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Do not take working clothes home. Refer to Section 8. Follow proper disposal methods. Combustible dusts formation is a risk. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substance.

**SAFE STORAGE & INCOMPATIBILITIES:**

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials. Avoid storage near extreme heat, ignition sources or open flame.

**8. Exposure Controls / Personal Protection**

**CONTROL PARAMETERS:**

14807-96-6, hydrous magnesium silicate, OSHA PEL TWA 2.0 mg/m<sup>3</sup>, NIOSH TWA 2.0 mg/m<sup>3</sup>, ACGIH TLV TWA 2.0 mg/m<sup>3</sup>  
13463-67-7, Titanium dioxide, ACGIH TLV: 10, OSHA PEL:10  
112945-52-5, Silica, amorphous, fumed, cryst-free, ACGIH TLV TWA: 10 mg/m<sup>3</sup> (inhaled particles) OSHA PEL TWA: 15 mg/m<sup>3</sup> (total dust)

**ENGINEERING CONTROLS:**

Emergency eyewash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mist below the applicable workplace exposure limits indicated above. (Occupational Exposure-OELS). It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosive relief vents or an explosive 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) Use under a fume hood.

**PERSONAL PROTECTIVE EQUIPMENT:**



**EYE PROTECTION:** Face shield (8-inch minimum) with tightly fitting safety goggles are appropriate eyewear. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU)

**SKIN PROTECTION:** Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer service. Avoid skin contact with used gloves. Wear protective clothing.

**RESPIRATORY PROTECTION:** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

**GENERAL HYGIENIC MEASURES:** Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before re-wearing wash contaminated clothing.

## 9. Physical & Chemical Properties

<b>Appearance:</b>		<b>Flammability(solid/gas):</b>	Not determined.
<b>Physical State/Color:</b>	Med viscosity liquid & colors	<b>Explosive Limit – lower (%):</b>	Not available.
<b>Odor:</b>	Ammonia.	<b>Explosive Limit – upper (%):</b>	Not available.
<b>Odor Threshold:</b>	Not determined.	<b>Vapor Pressure @20°:</b>	Not determined.
<b>pH:</b>	Not determined.	<b>Vapor Density:</b>	Not determined.
<b>Melting/Freezing Point:</b>	Not determined.	<b>Relative Density:</b>	1.77
<b>Boiling Point/Range:</b>	Not determined.	<b>Solubility:</b>	Not available.
<b>Partition Coeff (n-octanol/water):</b>	Not determined.	<b>Auto-Ignition Temperature:</b>	Not determined.
<b>Density:</b>	Not determined.	<b>Decomposition Temperature:</b>	Not determined.
<b>Flash Point (closed cup):</b>	Not determined.	<b>Evaporation Rate:</b>	Not determined.

## 10. Stability & Reactivity Information

### REACTIVITY:

Nonreactive under normal conditions.

### CHEMICAL STABILITY:

Stable under normal conditions. Chemically inert, properties are inert; affected by change in pH.

### POSSIBLE HAZARDOUS REACTIONS:

None under normal conditions.

### INCOMPATIBLE MATERIALS:

Strong acids, strong bases, oxidizing agents, hydrogen fluoride.

### CONDITIONS TO AVOID:

Incompatible materials.

### HAZARDOUS DECOMPOSITION PRODUCTS:

Magnesium oxide, Titanium oxides, carbon oxides, nitrogen oxides, ammonia. When heated to decomposition it emits acrid smoke and irritating fumes.

## 11. Toxicological Information

### ACUTE TOXICITY:

Oral: 13463-67-7 LD50:>5,000 mg/kg Species: Rat Method: Estimated

Inhalation: 13463-67-7 LC 50 rat-male and female. The substance can be absorbed into the body by inhalation.

Dermal: >1/000 mg/kg LD50 rabbit-male and female 84852-15-3 Dermal LD50 rabbit 2031 mg/kg

Oral: 84852-15-3, LD50 oral-Rat-male and female-1412 mg/kg

### CHRONIC TOXICITY:

Inhalation: May cause respiratory irritation.

### CORROSION IRRITATION:

Dermal: Section 2, Classified as skin irritant.

Ocular: Section 2, Classified as eye irritant.

### SENSITIZATION:

Classified as a skin sensitizer.

### STOT (Single Target Organ):

Classified as respiratory irritant.

### NUMERICAL MEASURES:

No additional information.

### CARCINOGENIC INFORMATION:

IARC Group 3(not classifiable) Monograph 68(1997)(listed under Amorphous silica)

### MUTAGENICITY:

Hamster lungs DNA inhibition. Hamster ovary sister chromatid exchange.

### REPRODUCTIVE TOXICITY:

Classified as possible causing reproductive harm to fertility or unborn child.

## 12. Ecological Information

### ECOTOXICITY:

Fish (acute 84852-15-3): 96 hr LC50 Pimephales promelas: 0.135 MG/L {flow-through}; 96 hr LC50 lepomis macrochirus: 0.1351 mg/l {flow-through}

Crustacea (acute 84852-15-3): 48 hr EC50 Daphnia magna: 0.14 mg/l

Algae (acute 84852-15-3): 96 hr EC50 Pseudokirchneriella subcapitata: 0.36-0.48 mg/l {static}; 72 hr EC50 Pseudokirchneriella subcapitata: 0.16-0.72 mg/l {static}; 72 hr EC50 Desmodesmus subspicatus: 1.3 mg/l

### PERSISTENCE AND DEGRADABILITY:

Aerobic-Exposure time 28 d result:<10%-according to the results of tests of biodegradable this product is not readily biodegradable 84852-15-3: aerobic-exposure time 28 d result: 62% readily biodegradable. There is no data for the product regarding degradability.

### BIOACCUMULATIVE POTENTIAL:

BCF \*84852-15-3): 271 species: fish

**MOBILITY IN SOIL:**

No additional information.

**OTHER ADVERSE EFFECTS:**

No additional information.

**13. Disposal Consideration**

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as usual product. Product or containers must not be disposed together with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**14. Transportation Information****UN NUMBER:**

2735

**UN PROPER SHIPPING NAME:**

Amines, Liquid, corrosive, NOS (4,4'-methylene bis cyclo hexanamine)

**LIMITED QUANTITY :**

None.

**Bulk:****Non Bulk**

RQ (if applicable): none

Proper shipping name: Environmentally

Hazardous substance, liquid, n.o.s.

Average molecular weight &lt;=700)

Hazard Class: 8

Hazard class: 8

Packing Group: II

Packing Group: II

Marine Pollutant(84852-15-3):

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**15. Regulatory Information****US FEDERAL REGULATIONS:****SARA 311/312 (Specific toxic chemical listings):** Reactive, acute, chronic.**SARA 313 (Specific toxic chemical listings):** 84852-15-3.1.0% de minimis concentration (listed under Chemical Category Nonylphenol)**RCRA (hazardous waste code):** None of the ingredients are listed.**TSCA (Toxic Substances Control Act):** All ingredients are listed.**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):** None of the ingredients are listed.**PROPOSITION 65 (California):****Chemicals known to cause cancer:** 14807-96-6 hydrous magnesium silicate.**Chemical known to cause reproductive toxicity for females:** None of the ingredients are listed.**Chemicals known to cause reproductive toxicity for males:** None of the ingredients are listed.**Chemicals known to cause developmental toxicity:** None of the ingredients are listed.**CANADA:****Canadian Domestic Substances List (DSL):** All ingredients are listed.**Canadian NPRI Ingredient Disclosure list (limit 0.1%):** None of the ingredients are listed.**Canadian NPRI Ingredient Disclosure list (limit 1%):** None of the ingredients are listed.**16. Other Information**

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of classification and labelling of chemicals

ACGIH; American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification Systems (USA)

ACGIH: American Conference of Governmental Industrial Hygienists

WHMIS: Workplace Hazardous Materials Information System (CANADA)

DNEL: Derived No-Effect level (Reach)

PNEC: Predicted No-Effect Concentration (Reach)

CFR: Code of Federal Regulations (USA)

SARA: Superfund Amendments and Reauthorization Act (USA)

RCRA: Resource Conservation and Recovery Act (USA)

TSCA: Toxic Substance Control Act (USA)

NPRI: National Pollutant Release Inventory (CANADA)

DOT: US Department of Transportation

CAS: Chemical Abstracts Service (Division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (CANADA)

DNEL: Derived No-Effect Level (Reach)



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