SAFETY DATA SHEET

1. Product and Company Identification

PRODUCT NUMBER: 2964

PRODUCT NAME: Epoxy Pack Part A

PRODUCT DESCRIPTION: 2964

COMPANY INFORMATION: **PRO CHEM, INC.**
1475 Bluegrass Lakes Parkway
Alpharetta, GA 30004

COMPANY PHONE: 1-800-241-8180

EMERGENCY TELEPHONE: 1-800-241-8180

INFOTRAC: 1-800-535-5053

2. Hazards Identification

GHS CLASSIFICATION:
Skin Corrosion/Irritation: Category 2
Serious Eye Damage/Eye Irritation: Category 2B
Skin Sensitization: Category 1
Carcinogenicity: Category 1A

SIGNAL WORD:
DANGER

SYMBOL:

OSHA/HCS STATUS:
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

HAZARD STATEMENTS:
Causes skin and eye irritation. May cause an allergic skin reaction. May cause cancer.

PRECAUTIONARY STATEMENTS:

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Avoid breathing dust. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response: IF EXPOSED OR CONCERNED: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage: Store locked up.

Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.

HAZARDS NOT OTHERWISE SPECIFIED:
None known.

3. Composition / Information on Ingredients

Chemical Name	CAS	Concentration % by Weight
Crystalline silica non-respirable	14808-60-7	10-30
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	25068-38-6	10-30
Occupational exposure limits, if available, are listed in Section 8.		

4. First Aid Measures

EMERGENCY OVERVIEW

EYES: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

SKIN: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

INHALATION:
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

INGESTION:
Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED:

Potential acute health effects:
Inhalation: No known significant effects or critical hazards.
Skin Contact: Causes skin irritation. May cause an allergic skin reaction.
Eye Contact: Causes serious eye irritation.
Ingestion: Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms:
Inhalation: No specific data.
Skin Contact: Adverse symptoms may include the following: Irritation and redness.
Eye Contact: Adverse symptoms may include the following: Pain or irritation, watering and redness.
Ingestion: No specific data.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments No specific treatment.

See toxicological information (Section 11).

5. Fire-Fighting Measures

SUITABLE FIRE EXTINGUISHING MEDIA:

Use an extinguishing agent suitable for the surrounding fire.

UNSUITABLE FIRE EXTINGUISHING MEDIA:

None known.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

No specific fire or explosion hazard.

HAZARDOUS THERMAL DECOMPOSITION PRODUCTS:

Decomposition products may include the following materials: Carbon dioxide, carbon monoxide, sulfur oxides, halogenated compounds, and metal oxide/oxides

SPECIFIC FIRE-FIGHTING METHODS:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:

Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental Release Measures

PERSONAL PRECAUTIONS:

For Nonemergency Personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For Emergency Responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel."

ENVIRONMENTAL PRECAUTIONS:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

METHODS & MATERIALS FOR CONTAINMENT & CLEAN-UP:

Small Spill: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large Spill: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and Storage

SAFE HANDLING:

Protective Measures: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice of General Occupational Hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

SAFE STORAGE & INCOMPATIBILITIES:

Do not store above the following temperature: 35°C (95°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure Controls / Personal Protection

Ingredient:	CAS #:	Exposure Limits:
crystalline silica non-respirable	14808-60-7	**OSHA PEL Z3 (United States, 9/2005). Notes: 250/(%SiO2+5)** TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable **OSHA PEL Z3 (United States, 9/2005). Notes: 10/(SiO2+2)** TWA: 10 MG/M3 / (%SiO2+2) 8 hours. Form: Respirable **ACGIH TLV (United States, 3/2012).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 1/2013).** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust **OSHA PEL Z3 (United States, 9/2005). Notes: 30/(%SiO2+2)** TWA: 30 MG/M3 / (%SiO2+2) 8 hours. Form: Total dust.

PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face Protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin Protection: Hand Protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Other: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection: Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

General Hygiene Considerations: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

APPROPRIATE ENGINEERING CONTROLS:

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

ENVIRONMENTAL EXPOSURE CONTROLS:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical & Chemical Properties

Physical State:	Solid (viscous mass).	**Auto-ignition temperature:**	Not available.
Color:	Metallic. Gray.	**Flammability Limit-lower (%):**	Not available.
Odor:	Ethereal.	**Flammability Limit-upper (%):**	Not available.
Odor Threshold:	Not available.	**Explosive Limit-Lower (%):**	Not available.
pH:	Not applicable.	**Explosive Limit-Upper (%):**	Not available.
Melting Point:	Not available.	**Vapor Density:**	Not available.
Boiling Point:	Not available.	**Vapor Pressure:**	Not available.
Viscosity:	Not available.	**Relative Density:**	2.52
Flash Point:	Closed cup: Not applicable. (Product does not sustain combustion.)	**Solubility:**	Insoluble in the following materials: Cold water and hot water.
Evaporation Rate:	Not applicable.	**Flammability(solid/gas):**	Flammable in the presence of the following materials or conditions: Open flames, sparks and static discharge.
Solubility in Water:	Not available.	**Decomposition Temp:**	>200°C (>392°F)

10. Stability & Reactivity Information

REACTIVITY:

No specific test data related to reactivity available for this product or its ingredients.

CHEMICAL STABILITY:

The product is stable.

POSSIBILITY OF HAZARDOUS REACTIONS:

Under normal conditions of storage and use, hazardous reactions will not occur.

INCOMPATIBLE MATERIALS:

No specific data.

CONDITIONS TO AVOID:

No specific data.

HAZARDOUS DECOMPOSITION PRODUCTS:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological Information

ACUTE TOXICITY:

No specific data.

IRRITATION/CORROSION:

Ingredient	Result	Species	Score	Exposure	Observation
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	Eyes - Mild irritant	Rabbit	-	100 mg 24 hours	-
	Skin - Moderate irritant	Rabbit	-	500 microliters 24 hours	-
	Skin - Severe irritant	Rabbit	-	2 mg	-

SENSITIZATION:

No specific data.

MUTAGENICITY:

No specific data.

CARCINOGENICITY:

No specific data.

CONCLUSION/SUMMARY:

IARC classifies TiO2 as a 2B carcinogen based in large part on several studies of the effects of the inhalation of TiO2 on animals in which the TiO2 particles were of various sizes. Particles defined as “ultrafine” have been shown to cause cancer in animals exposed to very high concentrations. A number of authorities have reviewed those studies and others involving exposure to ultrafine particles and have concluded that the effects result from overloading the respiratory system of the animals. The effects observed, according to the scientists, are not due to

TiO2 but are general responses to high levels of dust in the lungs. In addition, a carcinogenic effect of TiO2 dust in the workers was not observed in several epidemiology studies on more than 20,000 TiO2 industry workers in Europe and the USA, nor were other chronic diseases, including other respiratory diseases, associated with exposure to TiO2 dust. Accordingly, we have concluded that our products should not be classified on the basis of the presence of TiO2 in the products.

CLASSIFICATION:

Ingredient	OSHA	IARC	NTP
crystalline silica nonrespirable	-	1	Known to be a human carcinogen

REPRODUCTIVE TOXICITY:

No specific data.

TERATOGENICITY:

No specific data.

SPECIFIC TARGET ORGAN TOXICITY -single exposure:

No specific data.

SPECIFIC TARGET ORGAN TOXICITY -repeated exposure:

No specific data.

ASPIRATION HAZARD:

No specific data.

INFORMATION ON LIKELY ROUTES OF EXPOSURE:

Not available.

POTENTIAL ACUTE HEALTH EFFECTS:

Eyes: Causes serious eye irritation.
Skin: Causes skin irritation. May cause an allergic skin reaction.
Inhalation: No known significant effects or critical hazards.
Ingestion: Irritating to mouth, throat and stomach.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS:

Eye Contact: Adverse symptoms may include the following: pain or irritation, watering, redness.
Inhalation: No specific data.
Skin Contact: Adverse symptoms may include the following: irritation, redness.
Ingestion: No specific data.

DELAYED & IMMEDIATE EFFECTS & ALSO CHRONIC EFFECTS FROM SHORT & LONG-TERM EXPOSURE:

Short-Term Exposure:
Potential Immediate Effects: Not available.
Potential Delayed Effects: Not available.
Long-Term Exposure:
Potential Immediate Effects: Not available.
Potential Delayed Effects: Not available.
Potential Chronic Health Effects:
General: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity: May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental Effects: No known significant effects or critical hazards.
Fertility Effects: No known significant effects or critical hazards.

NUMERICAL MEASURE OF TOXICITY:

Acute Toxicity Estimates: No specific data.

12. Ecological Information

TOXICITY:

No specific data.

PERSISTENCE AND DEGRADABILITY:

No specific data.

BIOACCUMULATIVE POTENTIAL:

Ingredient	$LogP_{ow}$	BCF	Potential
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	2.64 to 3.78	31	low

MOBILITY IN SOIL:

Soil/Water Partition Coefficient (K_{oc}): Not available.

OTHER ADVERSE EFFECTS:

No known significant effects or critical hazards.

13. Disposal Consideration

DISPOSAL METHODS:

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA CLASSIFICATION:

Not applicable.

14. Transportation Information

DOT: **UN Number:** Not regulated.
UN Proper Shipping Name: -
Transport Hazard Class(es): --

Packing Group: --
Environmental Hazards: No.
Additional Information: --

TDG: **UN Number:** Not regulated.
UN Proper Shipping Name: -
Transport Hazard Class(es): --
Packing Group: --
Environmental Hazards: No.
Additional Information: --

MEXICO: **UN Number:** Not regulated.
UN Proper Shipping Name: -
Transport Hazard Class(es): --
Packing Group: --
Environmental Hazards: No.
Additional Information: --

IMDG: **UN Number:** Not regulated.
UN Proper Shipping Name: -
Transport Hazard Class(es): --
Packing Group: --
Environmental Hazards: No.
Additional Information: --

IATA: **UN Number:** Not regulated.
UN Proper Shipping Name: -
Transport Hazard Class(es): --
Packing Group: --
Environmental Hazards: No.
Additional Information: --

SPECIAL PRECAUTIONS FOR USER:

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15. Regulatory Information

US FEDERAL REGULATIONS:

TSCA 8(a) PAIR: Siloxanes and Silicones, di-Me, reaction products with silica.
TSCA 8(a) CDR Exempt/Partial Exemption: Not determined.
United States Inventory (TSCA 8b): All components are listed or exempted.
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Not listed.
Clean Air Act Section 602 Class I Substances: Not listed.
Clean Air Act Section 602 Class II Substances: Not listed.
SARA 302/304: Composition/information o ningredients: No products were found.
SARA 304 RQ: Not applicable.
SARA 311/312: Classification: Immediate (acute) health hazard. Delayed (chronic) health hazard.

COMPOSITION/INFORMATION ON INGREDIENTS:

Name	%	Fire Hazard	Sudden Release of Pressure	Reactive	Immediate (acute) Health Hazard	Delayed (chronic) Health Hazard
crystalline silica non-respirable	10-30	No	No	No	No	Yes
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	10-30	No	No	No	Yes	No

US STATE REGULATIONS:

Massachusetts: The following components are listed: TITANIUM DIOXIDE; BARIUM SULFATE; SILICA, CRYSTALLINE, QUARTZ.
New York: None of the components are listed.
New Jersey: The following components are listed: FERROSILICON; FERROCERIUM; TITANIUM DIOXIDE; TITANIUM OXIDE (TiO2); BARIUM SULFATE; SULFURIC ACID, BARIUM SALT (1:1); SILICA, QUARTZ; QUARTZ (SiO2).
Pennsylvania: The following components are listed: TITANIUM OXIDE (TIO2); BARIUM SULFATE; QUARTZ (SIO2).
Minnesota Hazardous Substances: None of the components are listed.
California Prop. 65: WARNING: This product contains a chemical known to the State of California to cause cancer.

Ingredient	Cancer	Reproductive	No significant risk level	Maximum acceptable doseage level
crystalline silica non-respirable	Yes	No	No	No
titanium dioxide	Yes	No	No	No

CANADA INVENTORY:

All components are listed or exempted.

INTERNATIONAL REGULATIONS:

International Lists:
Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): Not determined.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

SUBSTANCES OF VERY HIGH CONCERN:

None of the components are listed.

16. Other Information

KEY TO ABBREVIATIONS:

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labeling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

REFERENCES:

Not available.

NFPA	Health Hazards: 2	Flammability: 0	Instability: 0	Physical & Chemical Properties:

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

PRODUCT NUMBER:	2964	**COMPANY PHONE:**	1-800-241-8180
PRODUCT NAME:	EPOXY PACK PART B	**EMERGENCY TELEPHONE:**	1-800-241-8180
PRODUCT DESCRIPTION:	2-Part, Steel-Filled, Epoxy Resin	**INFOTRAC:**	1-800-535-5053
COMPANY INFORMATION:	**PRO CHEM, INC.** 1475 Bluegrass Lakes Parkway Alpharetta, GA 30004		

2. Hazards Identification

GHS CLASSIFICATION:	**SIGNAL WORD:**	**SYMBOL:**	
Carcinogenicity: Category 1A	**DANGER**		

OSHA/HCS STATUS:

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

HAZARD STATEMENTS:

May cause cancer.

PRECAUTIONARY STATEMENTS:

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: IF exposed or concerned: Get medical attention.

Storage: Store locked up.

Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.

HAZARDS NOT OTHERWISE SPECIFIED:

None known.

3. Composition / Information on Ingredients

Chemical Name	CAS	Concentration % by Weight
crystalline silica non-respirable	14808-60-7	5-10
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	1-5
Occupational exposure limits, if available, are listed in Section 8.		

4. First Aid Measures

EMERGENCY OVERVIEW

EYES: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

SKIN: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

INHALATION:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

INGESTION:

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED:

Potential acute health effects:

Inhalation: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact: No known significant effects or critical hazards.

Eye contact: No known significant effects or critical hazards.

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms:

Inhalation: No specific data.

Skin Contact: No specific data.

Eye Contact: No specific data.

Ingestion: No specific data.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Notes to physician In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments No specific treatment.

See toxicological information (Section 11).

5. Fire-Fighting Measures

SUITABLE FIRE EXTINGUISHING MEDIA:

Use an extinguishing agent suitable for the surrounding fire.

UNSUITABLE FIRE EXTINGUISHING MEDIA:

None known.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

No specific fire or explosion hazard.

HAZARDOUS THERMAL DECOMPOSITION PRODUCTS:

Decomposition products may include the following materials: Carbon dioxide, carbon monoxide, nitrogen oxides, sulfur oxides, and metal oxide/oxides.

SPECIFIC FIRE-FIGHTING METHODS:

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:

Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental Release Measures

PERSONAL PRECAUTIONS:

For Non-Emergency Personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For Emergency Responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel."

ENVIRONMENTAL PRECAUTIONS:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

METHODS & MATERIALS FOR CONTAINMENT & CLEAN-UP:

Small Spill: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large Spill: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and Storage

SAFE HANDLING:

Protective measures: Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on General Occupational Hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

SAFE STORAGE & INCOMPATIBILITIES:

Do not store above the following temperature: 35°C (95°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure Controls / Personal Protection

OCCUPATIONAL EXPOSURE LIMITS:

Ingredient	CAS #	Exposure Limi7s
crystalline silica non-respirable	14808-60-7	**OSHA PEL Z3 (United States, 9/2005). Notes: 250/(%SiO2+5)** TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable. **OSHA PEL Z3 (United States, 9/2005). Notes: 10/(SiO2+2)** TWA: 10 MG/M³ / (%SiO2+2) 8 hours. Form: Respirable. **ACGIH TLV (United States, 3/2012)** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction. **NIOSH REL (United States, 1/2013)** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust. **OSHA PEL Z3 (United States, 9/2005). Notes: 30/(%SiO2+2)** TWA: 30 MG/M³ / (%SiO2+2) 8 hours. Form: Total dust.

PERSONAL PROTECTIVE EQUIPMENT:

Eye/Face Protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side shields.

Skin Protection: Hand: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material

may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Body: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Other: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection: Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

General Hygiene Considerations: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

APPROPRIATE ENGINEERING CONTROLS:

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

ENVIRONMENTAL EXPOSURE CONTROLS:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical & Chemical Properties

Physical State:	Solid (viscous mass).	**Solubility:**	Insoluble in the following materials: cold water and hot water.
Color:	Dark gray.	**Flammability Limit-lower (%):**	Not available.
Odor:	Pungent (strong).	**Flammability Limit-upper (%):**	Not available.
Odor Threshold:	Not available.	**Explosive Limit-Lower (%):**	Not available.
pH:	Not available.	**Explosive Limit-Upper (%):**	Not available.
Melting Point:	Not available.	**Vapor Density:**	Not available.
Boiling Point:	Not available.	**Vapor Pressure:**	Not available.
Viscosity:	Not available.	**Relative Density:**	2.4
Flash Point:	Closed cup: Not applicable. (Product does not sustain combustion.)	**Flammability(solid /gas):**	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
Evaporation Rate:	Not applicable.	**Decomposition Temp:**	>200°C (>392°F)
Solubility (water):	Not available.	**Auto-Ignition Temp:**	Not available.

10. Stability & Reactivity Information

REACTIVITY:

No specific test data related to reactivity available for this product or its ingredients.

CHEMICAL STABILITY:

The product is stable.

POSSIBILITY OF HAZARDOUS REACTIONS:

Under normal conditions of storage and use, hazardous reactions will not occur.

INCOMPATIBLE MATERIALS:

No specific data.

CONDITIONS TO AVOID:

No specific data.

HAZARDOUS DECOMPOSITION PRODUCTS:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological Information

ACUTE TOXICITY:

Ingredient	Result	Species	Does	Exposure
2,4,6-tris (dimethylaminomethyl)phenol	LD50 Dermal	Rat	1280 mg/kg	-
	LD50 Oral	Rat	1200 mg/kg	-

IRRITATION/CORROSION:

Ingredient	Result	Species	Score	Exposure	Observation
2,4,6-tris (dimethylaminomethyl) phenol	Eyes - Severe irritant	Rabbit	-	24 hours 50 mcg	-
	Skin - Mild irritant	Rat	-	0.025 ml	-
	Skin - Severe irritant	Rat	-	0.25 ml	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 mg	-

SENSITIZATION:

No specific data.

MUTAGENICITY:

No specific data.

CARCINOGENICITY:

No specific data.

CLASSIFICATION:

Ingredient	OSHA	IARC	NTP
crystalline silica nonrespirable	-	1	Known to be a human carcinogen.

REPRODUCTIVE TOXICITY:

No specific data.

TERATOGENICITY:

No specific data.

SPECIFIC TARGET ORGAN TOXICITY -single exposure:

No specific data.

SPECIFIC TARGET ORGAN TOXICITY -repeated exposure:

No specific data.

ASPIRATION HAZARD:

No specific data.

INFORMATION ON THE LIKE ROUTES OF EXPOSURE:

Not available.

POTENTIAL ACUTE HEALTH EFFECTS:

Eye Contact: No known significant effects or critical hazards.

Skin Contact: No known significant effects or critical hazards.

Inhalation: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion: No known significant effects or critical hazards.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS:

Eye Contact: No specific data.

Skin Contact: No specific data.

Inhalation: No specific data.

Ingestion: No specific data.

DELAYED & IMMEDIATE EFFECTS & ALSO CHRONIC EFFECTS FROM SHORT & LONG-TERM EXPOSURE:

Short-Term Exposure:

Potential Immediate Effects: Not available.

Potential Delayed Effects: Not available.

Long-Term Exposure:

Potential Immediate Effects: Not available.

Potential Delayed Effects: Not available.

POTENTIAL CHRONIC HEALTH EFFECTS:

No specific data.

General: No known significant effects or critical hazards.

Carcinogenicity: May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental Effects: No known significant effects or critical hazards.

Fertility Effects: No known significant effects or critical hazards.

NUMERICAL MEASURES OF TOXICITY:

Acute Toxicity Estimates:

Route	ATE Value
Oral	22431.4 mg/kg
Dermal	23926.8 mg/kg

12. Ecological Information

TOXICITY:

No specific data.

PERSISTENCE AND DEGRADABILITY:

No specific data.

BIOACCUMULATIVE POTENTIAL:

Ingredient	$LogP_{ow}$	BCF	Potential
2,4,6-tris (dimethylaminomethyl)phenol	0.219	-	low

MOBILITY IN SOIL:

Not available.

OTHER ADVERSE EFFECTS:

No known significant effects or critical hazards.

13. Disposal Consideration

DISPOSAL INSTRUCTIONS:

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA CLASSIFICATION:

Not available.

14. Transportation Information

DOT: **UN Number:** Not regulated.
UN Proper Shipping Name: -
Transport Hazard Class(es): -
Packing Group: --
Environmental Hazards: No.
Additional Information: -

TDG: **UN Number:** Not regulated.
UN Proper Shipping Name: -
Transport Hazard Class(es): -
Packing Group: --
Environmental Hazards: No.
Additional Information: -

MEXICO: UN Number: Not regulated.
UN Proper Shipping Name: -
Transport Hazard Class(es): -
Packing Group: --
Environmental Hazards: No.
Additional Information: -

IMDG: UN Number: Not regulated.
UN Proper Shipping Name: -
Transport Hazard Class(es): -
Packing Group: --
Environmental Hazards: No.
Additional Information: -

IATA: UN Number: Not regulated.
UN Proper Shipping Name: -
Transport Hazard Class(es): -
Packing Group: --
Environmental Hazards: No.
Additional Information: -

SPECIAL PRECAUTIONS FOR THE USER:

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15. Regulatory Information

US FEDERAL REGULATIONS:

TSCA 8(a) PAIR: Siloxanes and Silicones, di-Me, reaction products with silica.
TSCA 8(a) CDR Exempt/Partial exemption: Not determined.
United States inventory (TSCA 8b): All components are listed or exempted.
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Not listed.
Clean Air Act Section 602 Class I Substances: Not listed.
Clean Air Act Section 602 Class II Substances: Not listed.
SARA 311/312: Classification: Delayed (chronic) health hazard.

Ingredient	%	Fire Hazard	Sudden Release of Pressure	Reactive	Immediate (acute) Health Hazard:	Delayed (chronic) Health Hazard:
crystalline silica non-respirable	5-10	No	No	No	No	Yes
2,4,6-tris (dimethylaminomethyl) phenol	1-5	No	No	No	Yes	no

US STATE REGULATIONS:

Massachusetts: The following components are listed: SILICA, CRYSTALLINE, QUARTZ; BARIUM SULFATE.
New York: None of the components are listed.
New Jersey: The following components are listed: FERROSILICON; FERROCERIUM; SILICA, QUARTZ; QUARTZ (SiO2); BARIUM SULFATE; SULFURIC ACID, BARIUM SALT (1:1).
Pennsylvania: The following components are listed: QUARTZ (SIO2); BARIUM SULFATE.
Minnesota Hazardous Substances: None of the components are listed.
California Prop. 65: WARNING: This product contains a chemical known to the State of California to cause cancer.

Ingredient	Cancer	Reproductive	No Significant Risk Level	Maximum Acceptable Dosage Level
crystalline silica non-respirable	Yes	No	No	No

INTERNATIONAL REGULATIONS:

Canada Inven tory: All components are listed or exempted.
International lists:
Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): Not determined.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

16. Other Information

KEY TO ABBREVIATIONS:

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labeling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

REFERENCES:

Not available.

NFPA	Health Hazards: 2	Flammability: 0	Instability: 0	Physical & Chemical Properties:

DISCLAIMER:

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