

# Glass Etching Solution

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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### SECTION 1: IDENTIFICATION

#### Product Identifier

**Product Name:** Glass Etching Solution

#### Intended Use of the Product

**Use of the Substance/Mixture:** For professional use only.

#### Name, Address, and Telephone of the Responsible Party

##### **Company**

Chem Etch Manufacturing INC.

905 Live Oak St.

Houston, TX 77003

877-564-2565

#### Emergency Telephone Number

**Emergency number :** (832) 606-0290

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification of the Substance or Mixture

##### **Classification (GHS-US)**

Acute Tox. 4 (Oral) H302

Skin Corr. 1B H314

Eye Dam. 1 H318

Aquatic Acute 2 H401

Aquatic Chronic 2 H411

#### Label Elements

##### **GHS-US Labeling**

##### **Hazard Pictograms (GHS-US)**



##### **Signal Word (GHS-US)**

:

##### **Hazard Statements (GHS-US)**

:

H302 - Harmful if swallowed  
H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
H401 - Toxic to aquatic life  
H411 - Toxic to aquatic life with long lasting effects

##### **Precautionary Statements (GHS-US)**

:

P260 - Do not breathe vapors, mist, spray  
P264 - Wash hands, forearms, and exposed areas thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P273 - Avoid release to the environment  
P280 - Wear eye protection, protective clothing, protective gloves, face shield  
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a POISON CENTER or doctor/physician  
P321 - Specific treatment (see Section 4)  
P363 - Wash contaminated clothing before reuse  
P391 - Collect spillage

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P405 - Store locked up

P501 - Dispose of contents/container according to local, regional, national, and international regulations

### Other Hazards

**Other Hazards Not Contributing to the Classification:** Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

**Unknown Acute Toxicity (GHS-US)** Not available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Water	(CAS No) 7732-18-5	51	Not classified
Ammonium bifluoride	(CAS No) 1341-49-7	33.8 - 34.6	Acute Tox. 3 (Oral), H301 Skin Corr. 1B, H314 Eye Dam. 1, H318
Starch	(CAS No) 9005-25-8	7	Comb. Dust
Amines, tallow alkyl, ethoxylated	(CAS No) 61791-26-2	5 - 3.2	Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Ethoxylated N-(tallow alkyl)trimethylene diamines	(CAS No) 61790-85-0	0.8 - 2	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Xanthan gum	(CAS No) 11138-66-2	2	Comb. Dust
Ammonium fluoride	(CAS No) 12125-01-8	1.4	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331
Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine	(CAS No) 26160-89-4	0.8	Not classified

This product may be regulated or have exposure limits or other information identified as the following: Fluorides; Fluorides, inorganic; Fluoride ion (CAS No) 16984-48-8

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### Description of First Aid Measures

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). If exposed or concerned: Get medical advice/attention.

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

**Skin Contact:** Remove contaminated clothing. Immediately flush skin with plenty of water for at least 60 minutes. Get medical advice/attention. Wash contaminated clothing before reuse.

**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. Call a POISON CENTER/doctor/physician if you feel unwell.

### Most Important Symptoms and Effects Both Acute and Delayed

**General:** Harmful if swallowed. Causes severe skin burns and eye damage.

**Inhalation:** Causes severe respiratory irritation if inhaled. Symptoms may include burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum.

**Skin Contact:** Corrosive. Causes burns.

**Eye Contact:** Causes serious eye damage.

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**Ingestion:** Swallowing a small quantity of this material will result in serious health hazard.

**Chronic Symptoms:** The chronic effects of this substance are unknown. Exposure may result in bone changes with associated joint stiffness.

### **Indication of Any Immediate Medical Attention and Special Treatment Needed**

If you feel unwell, seek medical advice (show the label where possible).

## **SECTION 5: FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** A heavy water stream may spread burning liquid.

### **Special Hazards Arising From the Substance or Mixture**

**Fire Hazard:** Not flammable.

**Explosion Hazard:** Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

**Reactivity:** May be corrosive to metals.

### **Advice for Firefighters**

**Precautionary Measures Fire:** Under fire conditions, hazardous fumes will be present.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Ammonia. Hydrogen. Hydrogen Fluoride. Highly toxic and corrosive gases are released.

### **Reference to Other Sections**

Refer to section 9 for flammability properties.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray). Do not allow product to spread into the environment.

#### **For Non-Emergency Personnel**

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### **For Emergency Personnel**

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Ventilate area. Eliminate ignition sources. Stop leak if safe to do so.

### **Environmental Precautions**

Prevent entry to sewers and public waters. Avoid release to the environment.

### **Methods and Material for Containment and Cleaning Up**

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clear up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Contact competent authorities after a spill.

### **Reference to Other Sections**

See heading 8, Exposure Controls and Personal Protection.

## **SECTION 7: HANDLING AND STORAGE**

### **Precautions for Safe Handling**

**Additional Hazards When Processed:** Corrosive vapors are released.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product.

### **Conditions for Safe Storage, Including Any Incompatibilities**

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Store tightly closed in a dry, cool and well-ventilated place.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers.

### **Specific End Use(s)**

For professional use only.

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control Parameters

<b>Starch (9005-25-8)</b>		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (total mass)
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (total mass)
Ontario	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (containing no Asbestos and <1% Crystalline silica)
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Yukon	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
<b>Fluorides, inorganic (RR-00599-2)</b>		
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
<b>Fluorides (RR-02792-9)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Nunavut	OEL STEL (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Yukon	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>

#### Exposure Controls

**Appropriate Engineering Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

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**Personal Protective Equipment:** Avoid all unnecessary exposure. Corrosion proof clothing. Gloves. Protective goggles. Protective clothing. Face shield. Insufficient ventilation: wear respiratory protection.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** Chemical goggles or safety glasses. A full faceshield is recommended.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

**Environmental Exposure Controls:** Do not allow the product to be released into the environment.

**Consumer Exposure Controls:** Do not eat, drink or smoke during use

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Pink
Odor	: Pungent
Odor Threshold	: Not available
pH	: Not available
Relative Evaporation Rate (butylacetate=1)	: Not available
Relative evaporation rate (ether=1)	: < 1
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: 125.6 °C (258 °F)
Flash Point	: Not available
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Relative Density	: Not available
Specific Gravity	: 1.3
Solubility	: Insoluble
Partition coefficient: n-octanol/water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge.

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** May be corrosive to metals.

**Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers. Metals. Attacks some forms of plastics, rubber, and coatings.

**Hazardous Decomposition Products:** Carbon oxides (CO, CO<sub>2</sub>). Hydrofluoric acid. Nitrogen oxides. Ammonia. Thermal decomposition generates: Corrosive vapors.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects - Product

**Acute Toxicity:** Harmful if swallowed.

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### LD50 and LC50 Data:

Glass Etching Solution	
ATE (oral)	344.000 mg/kg

**Skin Corrosion/Irritation:** Causes severe skin burns and eye damage.

**Serious Eye Damage/Irritation:** Causes serious eye damage.

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Teratogenicity:** Not available

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Potential Adverse Human Health Effects and Symptoms:** Harmful if swallowed.

**Symptoms/Injuries After Inhalation:** Causes severe respiratory irritation if inhaled. Symptoms may include burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum.

**Symptoms/Injuries After Skin Contact:** Corrosive. Causes burns.

**Symptoms/Injuries After Eye Contact:** Causes serious eye damage.

**Symptoms/Injuries After Ingestion:** Swallowing a small quantity of this material will result in serious health hazard.

**Chronic Symptoms:** The chronic effects of this substance are unknown. Exposure may result in bone changes with associated joint stiffness.

### Information on Toxicological Effects - Ingredient(s)

#### LD50 and LC50 Data:

Water (7732-18-5)	
LD50 Oral Rat	> 90000 mg/kg
Ammonium bifluoride (1341-49-7)	
LD50 Oral Rat	130 mg/kg
Fluorides, inorganic (RR-00599-2)	
IARC Group	3

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity

**Ecology - General:** Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Ammonium fluoride (12125-01-8)	
LC50 Fish 1	364.0 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

### Persistence and Degradability

Glass Etching Solution	
Persistence and Degradability	Not established. May cause long-term adverse effects in the environment.

### Bioaccumulative Potential

Glass Etching Solution	
Bioaccumulative Potential	Not established.

Ammonium bifluoride (1341-49-7)	
BCF fish 1	(completely dissociated in water)

**Mobility in Soil:** Not available

### Other Adverse Effects

**Other Information:** Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

**Ecology – Waste Materials:** This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

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### SECTION 14: TRANSPORT INFORMATION

#### 14.1 In Accordance with DOT

**Proper Shipping Name** : CORROSIVE LIQUIDS, N.O.S. (Contains Ammonium bifluoride and Amines)  
**Hazard Class** : 8  
**Identification Number** : UN1760  
**Label Codes** : 8  
**Packing Group** : III  
**Marine Pollutant** : Marine pollutant  
**ERG Number** : 154



#### 14.2 In Accordance with IMDG

**Proper Shipping Name** : CORROSIVE LIQUID, N.O.S. (Contains Ammonium bifluoride and Amines)  
**Hazard Class** : 8  
**Identification Number** : UN1760  
**Packing Group** : III  
**Label Codes** : 8  
**EmS-No. (Fire)** : F-A  
**EmS-No. (Spillage)** : S-B  
**Marine pollutant** : Marine pollutant



#### 14.3 In Accordance with IATA

**Proper Shipping Name** : CORROSIVE LIQUID, N.O.S. (Contains Ammonium bifluoride and Amines)  
**Packing Group** : III  
**Identification Number** : UN1760  
**Hazard Class** : 8  
**Label Codes** : 8  
**ERG Code (IATA)** : 8L



#### 14.4 In Accordance with TDG

**Proper Shipping Name** : CORROSIVE LIQUID, N.O.S. (Contains Ammonium bifluoride and Amines)  
**Packing Group** : III  
**Hazard Class** : 8  
**Identification Number** : UN1760  
**Label Codes** : 8  
**Marine pollutant** : Marine pollutant



### SECTION 15: REGULATORY INFORMATION

#### US Federal Regulations

<b>Glass Etching Solution</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard
<b>Ethoxylated N-(tallow alkyl)trimethylene diamines (61790-85-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Amines, tallow alkyl, ethoxylated (61791-26-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Water (7732-18-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Xanthan gum (11138-66-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine (26160-89-4)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Starch (9005-25-8)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

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<b>Ammonium fluoride (12125-01-8)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>Ammonium bifluoride (1341-49-7)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
<b>US State Regulations</b>
<b>Ethoxylated N-(tallow alkyl)trimethylene diamines (61790-85-0)</b>
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
<b>Amines, tallow alkyl, ethoxylated (61791-26-2)</b>
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
<b>Xanthan gum (11138-66-2)</b>
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
<b>Fluoride ion (16984-48-8)</b>
U.S. - Colorado - Primary Drinking Water Regulations - Maximum Contaminant Level Goals (MCLGs)
U.S. - Colorado - Primary Drinking Water Regulations - Maximum Contaminant Levels (MCLs)
U.S. - Colorado - Primary Drinking Water Regulations - Secondary Maximum Contaminant Levels (SMCLs)
U.S. - Connecticut - Drinking Water Quality Standards - Groundwater Sources
U.S. - Missouri - Drinking Water - Maximum Contaminant Levels (MCLs)
U.S. - Missouri - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)
U.S. - Montana - Ambient Air Quality Standards
U.S. - Nebraska - Drinking Water - Maximum Contaminant Levels (MCLs)
U.S. - Nevada - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)
U.S. - New Mexico - Water Quality - Standards for Ground Water of 10,000 mg/L TDS Concentration or Less
U.S. - New York - Occupational Exposure Limits - TWAs
RTK - U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 24-Hour
U.S. - Texas - Drinking Water Standards - Maximum Contaminant Levels (MCLs)
U.S. - Texas - Drinking Water Standards - Secondary Constituent Levels (SCLs)
<b>Starch (9005-25-8)</b>
U.S. - Idaho - Occupational Exposure Limits - TWAs
RTK - U.S. - Massachusetts - Right To Know List
U.S. - Michigan - Occupational Exposure Limits - TWAs
U.S. - Minnesota - Hazardous Substance List
U.S. - Minnesota - Permissible Exposure Limits - TWAs
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour
U.S. - Oregon - Permissible Exposure Limits - TWAs
RTK - U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Tennessee - Occupational Exposure Limits - TWAs
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term
U.S. - Vermont - Permissible Exposure Limits - TWAs
U.S. - Washington - Permissible Exposure Limits - STELs
U.S. - Washington - Permissible Exposure Limits - TWAs
<b>Ammonium fluoride (12125-01-8)</b>
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Louisiana - Reportable Quantity List for Pollutants
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity



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U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
RTK - U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Polluting Materials List  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
RTK - U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term

### **Ammonium bifluoride (1341-49-7)**

U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Louisiana - Reportable Quantity List for Pollutants  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
RTK - U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Polluting Materials List  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
RTK - U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
RTK - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
RTK - U.S. - Pennsylvania - RTK (Right to Know) List

### **Fluorides, inorganic (RR-00599-2)**

U.S. - Minnesota - Hazardous Substance List  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 25 Feet to Less Than 40 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 40 Feet to Less Than 75 Feet  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

### **Fluorides (RR-02792-9)**

U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic  
U.S. - California - SCAQMD - Toxic Air Contaminants With Proposed Risk Values  
U.S. - Connecticut - Drinking Water Quality Standards - Maximum Contaminant Levels  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Florida - Drinking Water Standards - Inorganic Contaminants - Maximum Contaminant Levels (MCLs)  
U.S. - Florida - Drinking Water Standards - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Georgia - Drinking Water - Maximum Contaminant Levels (MCLs)  
U.S. - Georgia - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Idaho - Occupational Exposure Limits - TWAs  
U.S. - Massachusetts - Allowable Ambient Limits (AALs)  
U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)  
U.S. - Massachusetts - Drinking Water - Maximum Contaminant Levels (MCLs)



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U.S. - Massachusetts - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
 U.S. - Massachusetts - Threshold Effects Exposure Limits (TELs)  
 U.S. - Michigan - Occupational Exposure Limits - TWAs  
 U.S. - Minnesota - Hazardous Substance List  
 U.S. - Minnesota - Permissible Exposure Limits - TWAs  
 U.S. - New Hampshire - Drinking Water - Maximum Contaminant Levels (MCLs)  
 U.S. - New Hampshire - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
 U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
 U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
 U.S. - New Jersey - Primary Drinking Water Standards - Maximum Contaminant Levels - MCLs  
 RTK - U.S. - New Jersey - Right to Know Hazardous Substance List  
 U.S. - New Jersey - Secondary Drinking Water Standards - Recommended Upper Limits (RULs)  
 U.S. - New Jersey - Water Quality - Ground Water Quality Criteria  
 U.S. - New Jersey - Water Quality - Practical Quantitation Levels (PQLs)  
 U.S. - New York - Occupational Exposure Limits - TWAs  
 U.S. - North Carolina - Control of Toxic Air Pollutants  
 U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour  
 U.S. - North Dakota - Water Quality Standards - Human Health Value for Classes I, IA, II  
 U.S. - Oregon - Permissible Exposure Limits - TWAs  
 U.S. - Pennsylvania - Drinking Water - Maximum Contaminant Levels (MCLs)  
 RTK - U.S. - Pennsylvania - RTK (Right to Know) List  
 U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour  
 U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 24-Hour  
 U.S. - South Carolina - Maximum Contaminant Levels (MCLs)  
 U.S. - South Carolina - Secondary Maximum Contaminant Levels (SMCLs)  
 U.S. - Tennessee - Occupational Exposure Limits - TWAs  
 U.S. - Utah - Drinking Water - Maximum Contaminant Levels (MCLs)  
 U.S. - Utah - Drinking Water - Secondary Maximum Contaminant Levels (SMCLs)  
 U.S. - Vermont - Permissible Exposure Limits - TWAs  
 U.S. - Washington - Permissible Exposure Limits - STELs  
 U.S. - Washington - Permissible Exposure Limits - TWAs  
 U.S. - West Virginia - Water Quality - Groundwater Standards - Ceiling Concentrations

### Canadian Regulations

<b>Glass Etching Solution</b>	
WHMIS Classification	Class E - Corrosive Material Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects
 	
<b>Ethoxylated N-(tallow alkyl)trimethylene diamines (61790-85-0)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
<b>Amines, tallow alkyl, ethoxylated (61791-26-2)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects
<b>Water (7732-18-5)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
<b>Xanthan gum (11138-66-2)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	

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<b>Formaldehyde, polymer with 6-phenyl-1,3,5-triazine-2,4-diamine (26160-89-4)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
<b>Starch (9005-25-8)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
<b>Ammonium fluoride (12125-01-8)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
<b>Ammonium bifluoride (1341-49-7)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class E - Corrosive Material Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects

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

### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Revision date** : 05/13/2014  
**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

#### GHS Full Text Phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhalation) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Comb. Dust	Combustible Dust
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Corr. 1C	Skin corrosion/irritation Category 1C
Comb. Dust	May form combustible dust concentrations in air
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H331	Toxic if inhaled
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

#### Party Responsible for the Preparation of This Document

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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*