



- Skin Contact / Absorption**..... May cause redness and severe burns.
- Eye Contact**..... Causes redness, pain, tissue burns and impaired vision.
- Ingestion**..... Corrosive product, will cause diarrhea, abdominal cramps, mouth and tongue pain, sore throat, nausea, stomach ache. May lead to death if ingested.
- Exposure Limits**..... ACGIH/TLV= 1mg/m<sup>3</sup>  
OSHA/PEL= 1mg/m<sup>3</sup>

**Section 04 - First Aid Measures**

- Inhalation**..... Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention.
- Skin Contact / Absorption**..... Remove contaminated clothing. Wash affected area with plenty of water. Seek medical attention if irritation occurs or persists.
- Eye Contact**..... Flush immediately with water for at least 20 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention.
- Ingestion**..... Do not induce vomiting if swallowed. Give large quantities of water if conscious. Seek medical attention immediately.
- Additional Information**..... Not available

**Section 05 - Fire Fighting**

- Conditions of Flammability**..... Not flammable
- Means of Extinction**..... Use appropriate media for surrounding fire (water, chemical foam, dry chemical, or carbon dioxide).
- Flash Point**..... Not applicable
- Auto-ignition Temperature**..... Not applicable
- Upper Flammable Limit** ..... Not applicable

**Lower Flammable Limit**..... Not applicable

**Hazardous Combustible Products**.... May release sulphur dioxide, sulphur trioxide, nitrogen oxides, and ammonia gas when heated in a fire.

**Special Fire Fighting Procedures**..... Wear NIOSH-approved self-contained breathing apparatus and protective clothing. Use water spray to cool structures and containers exposed to fire.

**Explosion Hazards**..... Not available

**Section 06 - Accidental Release Measures**

**Leak / Spill**..... Wear appropriate personal protective equipment. Ventilate area of spill, sweep up any spills and dispose of in appropriate container. Flush with water to remove any residue.

**Deactivating Materials**..... Not available

**Section 07 - Handling and Storage**

**Handling Procedures**..... Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.

**Storage Requirements**..... Keep in tightly closed containers. Store in a cool, dry, ventilated area away from heat, moisture and incompatibles.

**Section 08 - Personal Protection and Exposure Controls**

**Protective Equipment**

**Eyes**..... Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.

**Respiratory**..... A half-face dust/mist respirator should be worn where dust or mist is present. Wear a full-face positive-pressure, air supplied respirator in emergency situations or where exposure levels are unknown.

**Gloves**..... Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing with soap and water, dry thoroughly before reuse.

**Clothing**..... Body suits, aprons, and/or coveralls of chemical resistant material should be worn as needed to prevent contact with skin. Wash contaminated clothing with soap and water, dry thoroughly before reuse.

**Footwear**..... Impervious boots of chemically resistant material should be worn as needed.

### Engineering Controls

**Ventilation Requirements**..... Mechanical ventilation (general or local exhaust) is recommended to keep exposures as low as possible.. Supply sufficient replacement air to make up for air removed by exhaust systems.

**Other**..... Emergency shower and eyewash should be in close proximity.

## Section 09 - Physical and Chemical Properties

**Physical State**..... Solid

**Odor and Appearance**..... White odourless crystalline solid

**Odor Threshold**..... Not applicable

**Specific Gravity (Water=1)**..... 2.13

**Vapor Pressure (mm Hg, 20C)**..... Not available

**Vapor Density (Air=1)**..... 3.3

**Evaporation Rate**..... Not available

**Boiling Point**..... Not applicable

**Freeze/Melting Point**..... Decomposes at 205°C

**pH**..... 1.18 (1% solution)

**Water/Oil Distribution Coefficient**..... Not available

**Bulk Density**..... 1.04g/cm<sup>3</sup>

**% Volatiles by Volume**..... 0

**Solubility in Water**..... 17.57% at 20°C

**Molecular Formula**..... NH<sub>2</sub>SO<sub>3</sub>H

**Molecular Weight**..... 97.09

### Section 10 - Stability and Reactivity

**Stability**..... Stable under normal conditions.

**Incompatibility**..... Strong oxidizing agents, chlorine and nitric acid. aqueous solutions are strong acids which reacts with bases. Will hydrolyze at room temperature to form sulphate and bisulphate.

**Hazardous Products of Decomposition**... Decomposition products include sulphur dioxide, sulphur trioxide, nitrogen oxides, and ammonia gas.

**Polymerization**..... Will not occur

### Section 11 - Toxicological Information

**Irritancy**..... Strong irritant

**Sensitization**..... Not available

**Chronic/Acute Effects**..... Repeated or prolonged exposure to this product can produce target organs damage, exposure of the eyes to a low level of dust can produce eye irritation and repeated skin exposure can produce local skin destruction or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation, lung damage and chronic respiratory irritation.

**Synergistic Materials**..... Not available

**Animal Toxicity Data**..... LD<sub>50</sub>(oral,rat)= 3160mg/kg

**Carcinogenicity**..... Not listed as carcinogenic (IARC and ACGIH).

**Reproductive Toxicity**..... Not available

**Teratogenicity**..... Not available

**Mutagenicity**..... Not available

### Section 12 - Ecological Information

**Fish Toxicity**..... Not available

**Biodegradability**..... Hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Environmental Effects**..... Not available

**Section 13 - Disposal Consideration**

**Waste Disposal**..... Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

**Section 14 - Transportation Information**

**TDG Classification**

**Class**..... 8

**Group**..... III

**PIN Number**..... UN 2967

**Other**..... Secure containers (full and/or empty) with suitable hold down devices during shipment.

**Section 15 - Regulatory Information**

**WHMIS Classification**.....E

**NOTE: THE PRODUCT LISTED ON THIS MSDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS MSDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS**

**Section 16 - Other Information**

**Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.**