IDENTITY (As Used on Label & List): SULFURIC ACID

Section I – Manufacturer

IN A CHEMICAL EMERGENCY CONTACT: CHEMTREC
Emergency Telephone: (800) 424-9300

CASCADE WATER SERVICES
113 BLOOMINGDALE ROAD.
HICKSVILLE, NY 11801

Date Prepared: 07/05/07  Preparer: J. Nemetz

Section II – Hazardous Ingredients/Identity Information

Hazardous Components | OSHA PEL | ACGIH/TLV | Other Limits | % (Opt)
--- | --- | --- | --- | ---
Sulfuric Acid | 1 mg/m3 | 1 mg/m3 | none | >51%
Water | CAS# 7732-18-5 |

Section III – Physical/Chemical Characteristics

Boiling Point: - 310 °C
Specific Gravity (H₂O = 1): 1.842
Melting Point: -27 °C
Evaporation Rate: unknown
Butyl Acetate = 1
Appearance and Odor: Colorless to light yellow liquid. Cleat to turbid. Oily
pH: 0.9 (1% solution)

Section IV – Fire and Explosion Hazard Data

Flash Point (Method Used) – not applicable
Flammable Limits – not applicable

Extinguishing Media –
Water spray or fog must be used to knock down corrosive vapor cloud. Water may be used to cool sides of containers provided that the water does not come into contact with contents.

Special Fire Fighting Procedures –
Water spray should be used to cool fire exposed containers and/or to disperse vapors. Use Niosh/MSHA approved positive pressure self-contained breathing apparatus when material is involved in a fire. Do not get water in containers. Do not use water streams near ruptured
tanks or spills as acid reacts violently with water and can splatter.

Unusual Fire and Explosion Hazards –
- Flammable and potentially explosive hydrogen gas can be generated inside metal drums and storage tanks. Concentrated sulfuric acid can ignite combustible materials on contact.
- Contact with certain chemicals may generate toxic gases, heat and/or possibly explode (see below).

Section V – Reactivity Data

Stability – Stable: X Conditions to Avoid –
- Unstable: Mixing with strong alkalies and oxidizers. Temp. > 300 C

Incompatibility (Materials to Avoid) –
- Nitro compounds, Carbides, Dienes, Alcohols (when heated): Causes explosions
- Oxidizing agents such as chlorates and permanganates: Causes fires and possible explosions.
- Allyl compounds and aldehydes: Undergoes possibly violent polymerization
- Alkalies, amines, water, hydrated salts, carboxylic acid anhydrides, nitriles, olefinic organics, glycols, aqueous acids: Causes strong exothermic reactions.
- Carbonates, cyanides, sulfides, sulfites, metals such as copper: Yields toxic gases.

Hazardous Decomposition of Byproducts –
- Temperatures over 300 C yield Sulfur Trioxide gas, which is toxic, corrosive, and an oxidizer.

Hazardous Polymerization –
- May Occur: Conditions to Avoid –
- Will Not Occur: X none known

Section VI – Health Hazard Data

Routes of Entry – (Inhalation?) (Skin?) (Ingestion?)
- Skin, Eye, Inhalation, and Ingestion

Health Hazards (Acute and Chronic –
- Skin – Causes severe burns
- Eyes – Liquid contact can cause irritation, corneal burns, conjunctivitis, severe or permanent injury, or blindness.
- Inhalation – Inhalations of fumes or mists can irritate or burn upper respiratory system. May cause pulmonary edema.
- Ingestion – Concentrated or dilute forms can cause burns of the mouth, throat, and stomach. May be fatal if swallowed.
- Delayed Effects – Erosion of teeth, lesions of skin, mouth inflammation, conjunctivitis, gastritis, and tracheo-bronchitis.

Carcinogenicity – NTP? IARC Monographs? OSHA Regulated?
- IARC and NTP have classified “Strong inorganic acid mists containing sulfuric acid” as a known human carcinogen. This applies to mists only and not sulfuric acid or sulfuric acid solutions.

Signs and Symptoms of Exposure –
- Itching, irritation, and/or burning of eyes, skin, or mucous membranes.

Medical Conditions Generally Aggravated by Exposure – none known

Emergency and First Aid Procedures –
- Eyes – immediately flush with lots of water for at least 15 minutes holding lids apart to ensure
flushing of entire surface. Seek immediate medical attention.
Skin – Immediately wash with lots of water. Remove contaminated clothes & footwear and wash before reuse.
Ingestion – DO NOT INDUCE VOMITING. Give victim two glasses of water. Call a physician immediately. Never give anything by mouth to an unconscious person.
Inhalation – Remove to fresh air. If breathing or difficult has stopped, apply artificial respiration or O₂. Get medial attention.

Section VII – Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled –
Stop leaks and contain. Dilute spill with water and neutralize SLOWLY AND CAUTIOUSLY with sodium bicarbonate or other suitable neutralizer. When using carbonates, adequate precautions must be taken for carbon dioxide gas generation. Attempt to keep out of sewers. No smoking near spills.
Waste Disposal Method –
Follow all local, state, and federal EPA regulations for disposal. Unneutralized product, when discharged, is a hazardous waste EPA Corrosive Waste D002.
Precautions to be Taken in Handling and Storing –
Avoid breathing mists. Do not get in eyes, on skin, or on clothing. Do not take internally. Use with adequate ventilation. Store in a cool, dry place. Store away from heat and flame. Keep container closed when not in use. Corrosive to metals. When diluting, always add acid to water cautiously and with agitation. Keep out of sun. No smoking in storage area.
Other Precautions –
Avoid contamination by air and water. Do not freeze. Wash thoroughly any equipment after handling.

Section VIII – Control Measures

Respiratory Protection (Specify Type) –
Use NIOSH mist respirator where mists and vapors are generated.
Ventilation –
Local Exhaust: Adequate local exhaust necessary
Mechanical (General): Recommended
Special: Other:
Protective Gloves: Chemical Impermeable or Rubber gloves
Eye Protection: Face shield and chemical goggles. Do not wear contact lenses.
Other Protective Clothing or Equipment –
Clothing must protect areas of the body that risk contact. Safety shoes, rubber boots, rubber apron are all recommended. Have an Eyewash and Safety Shower on hand.
Work/Hygienic Practices –
Wash thoroughly after handling.