# SAFETY DATA SHEET

**SULFURIC ACID 66 DEG.**
**Product ID: AC006600**
**Revised:** 11-03-2016
**Replaces:** 06-25-2014

## 1. IDENTIFICATION

| | |
|---|---|
| **Product Identifier:** | SULFURIC ACID 66 DEG. |
| **Other Identifiers:** | Sulfuric acid; Oil of vitriol; Hydrogen sulfate |
| **CAS Number:** | MIXTURE |
| **Recommended Use:** | No data available. |
| **Restrictions on Use:** | No data available. |

**Hydrite Chemical Co.**
**300 N. Patrick Blvd.**
**Brookfield, WI 53008-0948**
**(262) 792-1450**

**EMERGENCY RESPONSE NUMBERS:**
**24 Hour Emergency #: (414) 277-1311**
**CHEMTREC Emergency #: (800) 424-9300**

## 2. HAZARD(S) IDENTIFICATION

**GHS Classification(s):**
Substance or mixture corrosive to metals Category 1
Skin Corrosion/Irritation Category 1A
Serious Eye Damage/Eye Irritation Category 1
Carcinogenicity Category 1A
Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 1
Acute Toxicity - Inhalation Dust / Mist Category 2
Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure Category 2

**GHS Label Elements:**

**GHS Hazard Symbols:**

**Signal Word:** Danger

**Hazard Statements:**
May be corrosive to metals.
Causes severe skin burns and eye damage.
Fatal if inhaled.
May cause cancer.
Causes damage to organs.
May cause damage to organs (teeth, respiratory system) through prolonged or repeated exposure (by inhalation).

**Precautionary Statements:**

**Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep only in original container.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Wear respiratory protection.

**Response:**
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

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|---|---|
| | water.<br>IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.<br>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>Immediately call a POISON CENTER or doctor/physician.<br>Specific treatment is urgent (see First Aid on SDS or on this label).<br>Wash contaminated clothing before reuse.<br>Absorb spillage to prevent material damage. |
| **Storage:** | Store in a well-ventilated place. Keep container tightly closed.<br>Store in a secure manner.<br>Store in corrosive resistant container with a resistant inner liner. |
| **Disposal:** | Dispose of in accordance with local, regional and international regulations. |

**Hazards Not Otherwise Classified:** None known.

**Percentage of Components with Unknown Acute Toxicity:**
**Oral:** 93.2 %
**Dermal:** 93.2 %

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substances/Mixtures:**

| Chemical or Common Name/Synonyms | CAS Number | % by Wt. |
|---|---|---|
| Sulfuric Acid | 7664-93-9 | 93.19 % |

Note: Any chemical identity and/or exact percentage not expressly stated is being withheld as a trade secret or is due to batch variation.

## 4. FIRST-AID MEASURES

**Description of Necessary Measures:**

**Eye Contact:** If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention.

**Skin Contact:** If on skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. Discard contaminated leather articles such as shoes and belt. Do not apply oils or ointments unless ordered by the physician.

**Inhalation:** If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

**Ingestion:** If swallowed: If fully conscious, drink a quart of water. DO NOT induce vomiting. CALL A PHYSICIAN IMMEDIATELY. If unconscious or in convulsions, take immediately to a hospital or a physician. NEVER induce vomiting or give anything by mouth to an unconscious victim. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

**Most Important Symptoms/Effects, Acute and Delayed:**

**Eye Contact:** CORROSIVE-Causes severe irritation and burns. May cause: blurred vision. redness. pain. conjunctivitis. ulcerations. tissue destruction. permanent eye damage. blindness.

**Skin Contact:** CORROSIVE-Causes severe irritation and burns. Concentrated solutions may cause: severe burns. severe necrosis. permanent skin damage. Prolonged and repeated exposure to dilute solutions may cause irritation, redness, pain and drying and cracking of the skin.

**Skin Absorption:** No data available.

**Inhalation:** CORROSIVE-Causes severe irritation and burns. Vapors or mists may damage: mucous membranes. respiratory tract. Vapors or mists may cause: coughing. sore throat. shortness of breath. labored

breathing. choking. bronchospasms. chemical pneumonitis. pulmonary edema. death. Effects may be delayed. Chronic exposure may cause: dental erosions. discoloration of teeth. bronchitis. bronchial emphysema.

**Ingestion:** CORROSIVE-Causes severe irritation and burns. May cause damage to the: mouth. throat. esophagus. stomach. gastrointestinal tract. May cause: pain. vomiting. diarrhea. bleeding. labored breathing. burns or perforation of the gastrointestinal tract leading to ulceration and secondary infection. death. Effects may be delayed. Aspiration into the lungs may cause chemical pneumonia and lung damage.

**Indication of Immediate Medical Attention and Special Treatment Needed:** This product contains materials that may cause severe pneumonitis if aspirated. If ingestion has occurred less than 2 hours earlier, carry out careful gastric lavage; use endotracheal cuff if available, to prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis. Give artifical resuscitation and appropriate chemotherapy if respiration is depressed. Following exposure the patient should be kept under medical review for at least 48 hours as delayed pneumonitis may occur. DO NOT attempt to neutralize the acid with weak bases since the reaction will produce heat that may extend the corrosive injury.

## 5. FIRE-FIGHTING MEASURES

**Extinguishing Media:** Carbon dioxide. Dry chemical. Foam.

**Specific Hazards Arising from the Chemical:**

**Fire and Explosion Hazards:** Product may react with some metals (ex.: Aluminum, Zinc, Tin, etc.) to release flammable hydrogen gas. Will react with organic materials with evolution of heat and sulfur dioxide. Concentrated acid is a strong oxidizing agent. May cause ignition of combustible materials on contact with generation of sulfur dioxide fumes.

**Hazardous Combustion Products:** Sulfur oxides.

**Special Protective Equipment and Precautions for Fire-Fighters:** Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers. Do not get water inside containers. Product generates heat upon addition of water, with possible spattering. Neutralize run-off with Lime, Soda Ash, etc., to prevent corrosion of metals and formation of Hydrogen gas. Run-off from fire control may cause pollution.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment, Emergency Procedures:** CORROSIVE MATERIAL. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit.

**Methods and Materials for Containment and Clean Up:** Neutralize spill with lime or soda ash. Absorb with an inert material. Contain spill, place into drums for proper disposal. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Empty containers retain product residue (vapor, dust, or liquid) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other source of ignition. They may explode and cause injury or death. Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion. Use non-sparking tools.

**Conditions for Safe Storage, Including any Incompatibilities:** CORROSIVE MATERIAL. Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Do not freeze. Highly corrosive to most metals with evolution of hydrogen gas. Explosive/flammable concentrations of hydrogen

gas may accumulate inside metal containers. Elevated temperatures will increase the corrosion rate of most metals.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**OSHA Exposure Guidelines:**

| Component | Limits |
|---|---|
| Sulfuric Acid | 1 mg/m3 TWA |

**ACGIH Exposure Guidelines:**

| Component | Limits |
|---|---|
| Sulfuric Acid | 0.2 mg/m3 TWA (thoracic particulate matter) |

**Engineering Controls:** Local exhaust ventilation, process enclosures, or other engineering controls are required when handling or using this product to avoid overexposure. Maintain adequate ventilation. Do not use in closed or confined spaces. Avoid creating dust or mist. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

**Individual Protection Measures:**

**Eye/Face Protection:** Wear chemical safety goggles and a full face shield while handling this product. Do not wear contact lenses.

**Skin Protection:** Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Acid-proof. Chemical-resistant. Impervious.

**Respiratory Protection:** Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If exposure limits are exceeded, wear: NIOSH-Approved air-purifying respirator with: Acid gas cartridge and Dust/mist filter. NIOSH-Approved positive pressure supplied air respirator. NIOSH-Approved self-contained breathing apparatus. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

**Other Protective Equipment:** Eye-wash station. Safety shower. Rubber apron. Chemical safety shoes. Rubber boots. Protective clothing. Full-rubber acid suit.

**General Hygiene Conditions:** Wash with soap and water before meal times and at the end of each work shift. Food, beverages, and tobacco products should not be carried, stored or consumed where this material is in use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Oily liquid.
**Color:** Clear to cloudy. Colorless to amber.
**Odor:** Odorless to pungent.
**Odor Threshold:** N.D.
**pH:** < 1
**Freezing Point (deg. F):** ~ -21
**Melting Point (deg. F):** N.A.
**Initial Boiling Point or Boiling Range:** ~ 529 °F
**Flash Point:** N.A.
**Flash Point Method:** N.A.
**Evaporation Rate (nBuAc = 1):** <1
**Flammability (solid, gas):** N.D.
**Lower Explosion Limit:** N.A.
**Upper Explosion Limit:** N.A.
**Vapor Pressure (mm Hg):** 0.0016 @102F
**Vapor Density (air=1):** 3.4 ($H_2SO_4$)
**Specific Gravity or Relative Density:** 1.835 @25C
**Solubility in Water:** Complete

**Partition Coefficient (n-octanol/water):** N.D.
**Autoignition Temperature:** No Data
**Decomposition Temperature:** N.D.
**Viscosity:** N.D.
**% Volatile (wt%):** N.D.
**VOC (wt%):** 0
**VOC (lbs/gal):** 0
**Fire Point:** N.D.

## 10. STABILITY AND REACTIVITY

**Reactivity:** No data available.

**Chemical Stability:** Stable under normal conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur under normal conditions. May react with certain metals to produce flammable hydrogen gas. Hazardous gases are evolved on contact with chemicals such as cyanides, sulfides, carbides, etc.

**Conditions to Avoid:** Avoid contact with heat, sparks, electric arcs, other hot surfaces, and open flames. Contact with organic materials may cause fire and explosions. Contact with water may cause violent reaction with evolution of heat. To dilute: Add product slowly to lukewarm water; not water to product.

**Incompatible Materials:** Metals. Water. Alkalies. Strong oxidizing agents. Reducing agents. Carbonates. Cyanides. Sulfides. Carbides. Chlorates. Fulminates. Nitrates. Powdered metals. Organic materials. Combustible materials. Nitrogen compounds. Picrates. Bases. Halogens. Alkali metals. and many other reactive substances.

**Hazardous Decomposition Products:** Sulfur oxides. Sulfuric acid vapors. Hydrogen gas.

## 11. TOXICOLOGICAL INFORMATION

**Routes of Exposure:** Eyes. Ingestion. Inhalation. Skin.

**Symptoms/Effects: Acute, Delayed and Chronic:**

**Eye Contact:** CORROSIVE-Causes severe irritation and burns. May cause: blurred vision. redness. pain. conjunctivitis. ulcerations. tissue destruction. permanent eye damage. blindness.

**Skin Contact:** CORROSIVE-Causes severe irritation and burns. Concentrated solutions may cause: severe burns. severe necrosis. permanent skin damage. Prolonged and repeated exposure to dilute solutions may cause irritation, redness, pain and drying and cracking of the skin.

**Skin Absorption:** No data available.

**Inhalation:** CORROSIVE-Causes severe irritation and burns. Vapors or mists may damage: mucous membranes. respiratory tract. Vapors or mists may cause: coughing. sore throat. shortness of breath. labored breathing. choking. bronchospasms. chemical pneumonitis. pulmonary edema. death. Effects may be delayed. Chronic exposure may cause: dental erosions. discoloration of teeth. bronchitis. bronchial emphysema.

**Ingestion:** CORROSIVE-Causes severe irritation and burns. May cause damage to the: mouth. throat. esophagus. stomach. gastrointestinal tract. May cause: pain. vomiting. diarrhea. bleeding. labored breathing. burns or perforation of the gastrointestinal tract leading to ulceration and secondary infection. death. Effects may be delayed. Aspiration into the lungs may cause chemical pneumonia and lung damage.

**Numerical Measures of Toxicity:**

| Component | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Sulfuric Acid | No Data | No Data | 2H Rat: 510 mg/m3 |

**Acute Toxicity Estimate (ATE):**
**Inhalation Dust/Mist:** 0.0537 mg/L

**Cancer Information:**

This product contains 0.1% or more of the following chemicals listed by NTP, IARC or OSHA as known or possible carcinogens:
Sulfuric acid mist

**Medical Conditions Aggravated by Exposure to Product:** Eye disorders. Skin disorders. Respiratory system disorders.

**Other:** Circulatory collapse with clammy skin, weak and rapid pulse, shallow respirations, and scanty urine may follow skin contact or ingestion. Circulatory shock is often the immediate cause of death. The International Agency for Research on Cancer (IARC) has concluded that occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to man, causing cancer of the larynx (the voice box). Although no direct link has been established between exposure to sulfuric acid itself, and cancer in man, exposure to any mist or aerosol during the use of this product should be avoided.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicological Information:** No data available.

**Chemical Fate Information:** No data available.

## 13. DISPOSAL CONSIDERATIONS

**Hazardous Waste Number:** D002

**Disposal Method:** Dispose of in a permitted hazardous waste management facility following all local, state and federal regulations. Since emptied containers retain product residue, follow label warnings even after container is emptied. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition.

## 14. TRANSPORT INFORMATION

**DOT (Department of Transportation):**

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|---|---|
| **Identification Number:** | UN1830 |
| **Proper Shipping Name:** | SULFURIC ACID |
| **Hazard Class:** | 8 |
| **Packing Group:** | II |
| **Label Required:** | CORROSIVE |
| **Reportable Quantity (RQ):** | 1000# (Sulfuric Acid) |

## 15. REGULATORY INFORMATION

**TSCA Inventory Status:** All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

**SARA Title III Section 311/312 Category Hazards:**

| Immediate (Acute) | Delayed (Chronic) | Fire Hazard | Pressure Release | Reactive |
|---|---|---|---|---|
| Yes | Yes | No | No | Yes |

| Regulated Components: Component | CAS Number | CERCLA RQ | SARA EHS | SARA 313 | U.S. HAP | WI HAP | Prop 65 |
|---|---|---|---|---|---|---|---|
| Sulfuric Acid | 7664-93-9 | Yes | Yes | Yes | No | Yes | Yes |

***Prop 65 - May Contain the Following Trace Components:**
Sulfur Dioxide

**Note:** * Sulfuric acid appears on the Section 313 List. However, the listing only applies to the aerosol forms of sulfuric acid.

## 16. OTHER INFORMATION

**Hazard Rating System**
**Health:** 3*
**Flammability:** 0
**Reactivity:** 2
* = Chronic Health Hazard

**NFPA Rating System**
**Health:** 3
**Flammability:** 0
**Reactivity:** 2
**Special Hazard:** W

**SDS Abbreviations**
**N.A. = Not Applicable**
**N.D. = Not Determined**
**HAP = Hazardous Air Pollutant**
**VOC = Volatile Organic Compound**
**C = Ceiling Limit**
**N.E./Not Estab. = Not Established**

**SDS Prepared by:** CH

**Reason for Revision:** New format. Changes made throughout the SDS.

**Revised:** 11-03-2016
**Replaces**: 06-25-2014

**The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which HYDRITE CHEMICAL CO. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.**