



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Product Name</b>	<b>Sulphuric Acid</b>
<b>CAS #</b>	Mixture
<b>Product use</b>	Used in manufacture of fertilizers, explosives, other acids, metal pickling and Petroleum processing.
<b>Manufacturer</b>	SODROX Chemicals Ltd. 7040 Wellington Road 124, R.R. #6 Guelph, ON N1H 6J3 CA Business Phone: 519-837-2330 Fax: 519-837-3300 Emergency Phone: 1-800-363-6824

## 2. Hazards Identification

<b>Emergency overview</b>	DANGER -- CORROSIVE CAUSES SKIN AND EYE BURNS. VERY TOXIC. MAY BE FATAL IF SWALLOWED OR INHALED.
<b>Potential short term health effects</b>	
<b>Routes of exposure</b>	Eye, Skin contact, Skin absorption, Inhalation, Ingestion.
<b>Eyes</b>	Causes chemical burns. May cause blindness.
<b>Skin</b>	Causes chemical burns.
<b>Inhalation</b>	Harmful if inhaled. May cause respiratory tract irritation or chemical burns.
<b>Ingestion</b>	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
<b>Target organs</b>	Eyes. Respiratory system. Skin.
<b>Chronic effects</b>	Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.
<b>Signs and symptoms</b>	The product causes burns of eyes, skin and mucous membranes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
<b>OSHA Regulatory Status</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
<b>Potential environmental effects</b>	See section 12.

## 3. Composition / Information on Ingredients

<b>Ingredient(s)</b>	<b>CAS #</b>	<b>Percent</b>
Sulfuric acid	7664-93-9	60 - 100

## 4. First Aid Measures

<b>First aid procedures</b>	
<b>Eye contact</b>	Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 20 minutes. Obtain medical attention immediately.
<b>Skin contact</b>	Immediately flush with cool water for 20 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical attention if irritation persists.
<b>Inhalation</b>	If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately.
<b>Ingestion</b>	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.
<b>Notes to physician</b>	This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately. Symptoms may be delayed.

**General advice**

Wear impervious gloves and chemical splash goggles. Avoid contact with eyes and skin. Immediate medical attention is required. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Keep out of reach of children.

## 5. Fire Fighting Measures

**Flammable properties**

Not flammable by WHMIS/OSHA criteria.  
Not flammable, but reacts with most metals to form flammable hydrogen gas. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing media**

**Suitable extinguishing media** Treat for surrounding material.

**Unsuitable extinguishing media** Not available

**Protection of firefighters**

**Specific hazards arising from the chemical** Not available

**Protective equipment for firefighters** Firefighters should wear full protective clothing including self contained breathing apparatus.

**Hazardous combustion products**

May include and are not limited to: Oxides of sulphur. Irritating and/or toxic gases may be emitted upon the products decomposition.

**Explosion data**

**Sensitivity to mechanical impact** Not available

**Sensitivity to static discharge** Not available

## 6. Accidental Release Measures

**Personal precautions**

Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

**Environmental precautions**

Prevent entry into waterways, sewers, basements or confined areas.

**Methods for containment**

Stop leak if you can do so without risk.

**Methods for cleaning up**

Should not be released into the environment. Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills to original containers for re-use.

## 7. Handling and Storage

**Handling**

**DANGER -- CORROSIVE**  
Use good industrial hygiene practices in handling this material.  
Do not get this material in your eyes, on your skin, or on your clothing.  
Avoid breathing vapors or mists of this product.  
Use only with adequate ventilation.  
Keep container tightly closed.  
Wash thoroughly after handling.

**Storage**

Keep out of the reach of children.  
Keep away from heat, open flames or other sources of ignition.  
Keep in a cool, well-ventilated place.  
Store in a closed container away from incompatible materials.  
Keep from freezing.

## 8. Exposure Controls / Personal Protection

**Exposure limits****Ingredient(s)****Exposure Limits**

Sulfuric acid

**ACGIH-TLV**  
TWA: 0.2 mg/m<sup>3</sup>  
**OSHA-PEL**  
TWA: 1 mg/m<sup>3</sup>

<b>Engineering controls</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
<b>Personal protective equipment</b>	
<b>Eye / face protection</b>	Wear chemical goggles and face shield.
<b>Hand protection</b>	Impervious gloves. Confirm with reputable supplier first.
<b>Skin and body protection</b>	Use of an impervious apron is recommended.
<b>Respiratory protection</b>	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

## 9. Physical and Chemical Properties

<b>Appearance</b>	Clear
<b>Color</b>	Colourless - amber
<b>Form</b>	Oily Liquid
<b>Odor</b>	Odourless
<b>Odor threshold</b>	Not applicable
<b>Physical state</b>	Liquid
<b>pH</b>	0.3 (1N solution at 25°C/77°F)
<b>Melting point</b>	Not available
<b>Freezing point</b>	-21.10 °F (-29.5 °C) (93.19% solution)
<b>Boiling point</b>	528.80 °F (276 °C) (93.19% solution)
<b>Pour point</b>	Not available
<b>Evaporation rate</b>	Not applicable
<b>Flash point</b>	Not applicable
<b>Auto-ignition temperature</b>	Not applicable
<b>Flammability limits in air, lower, % by volume</b>	Not applicable
<b>Flammability limits in air, upper, % by volume</b>	Not applicable
<b>Vapor pressure</b>	0.0016 MmHg @ 40°C (104°F) (93.19% solution)
<b>Vapor density</b>	3.4 Sulphuric acid component (Air = 1)
<b>Specific gravity</b>	1.84 @ 15°C (59°F) (93.19% solution)
<b>Octanol/water coefficient</b>	Not available
<b>Solubility (H2O)</b>	Miscible in all proportions
<b>Viscosity</b>	Not available
<b>Percent volatile</b>	Not available
<b>Molecular weight</b>	98.08 g/mol

## 10. Stability and Reactivity

<b>Reactivity</b>	Reacts violently with alkaline material. This product may react with reducing agents.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Heat, flames and sparks. Do not mix with other chemicals.
<b>Incompatible materials</b>	Bases. Reducing agents. Contact with metals may evolve flammable hydrogen gas.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of sulphur. Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.

## 11. Toxicological Information

### Component analysis - LC50

Ingredient(s)	LC50
Sulfuric acid	1020 mg/l/4h rat; 160 mg/m3 mouse

**Component analysis - Oral LD50****Ingredient(s)****LD50**

Sulfuric acid 2140 mg/kg rat

**Effects of acute exposure****Eye** Causes chemical burns. May cause blindness.**Skin** Causes chemical burns.**Inhalation** Harmful if inhaled. May cause respiratory tract irritation or chemical burns.**Ingestion** Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.**Sensitization** Non-hazardous by WHMIS/OSHA criteria.**Local effects** Very toxic by inhalation.**Chronic effects** Non-hazardous by WHMIS/OSHA criteria.**Carcinogenicity** There is sufficient evidence that occupational exposure to strong inorganic acid mists containing sulphuric acid is carcinogenic.**ACGIH - Threshold Limit Values - Carcinogens**

Sulfuric acid 7664-93-9 A2 - Suspected Human Carcinogen (contained in strong inorganic acid mists)

**IARC - Group 1 (Carcinogenic to Humans)**

Sulfuric acid 7664-93-9 Monograph 54 [1992] (Occupational exposure to mists and vapours from sulfuric acid and other strong inorganic acids)

**Mutagenicity** Non-hazardous by WHMIS/OSHA criteria.**Reproductive effects** Non-hazardous by WHMIS/OSHA criteria.**Teratogenicity** Non-hazardous by WHMIS/OSHA criteria.**Name of Toxicologically Synergistic Products** Not available**12. Ecological Information****Ecotoxicity** Components of this product have been identified as having potential environmental concerns.**Ecotoxicity - Freshwater Fish - Acute Toxicity Data**

Sulfuric acid 7664-93-9 96 Hr LC50 Brachydanio rerio: &gt;500 mg/L [static]

**Ecotoxicity - Water Flea - Acute Toxicity Data**

Sulfuric acid 7664-93-9 24 Hr EC50 Daphnia magna: 29 mg/L

**Persistence / degradability** Not available**Bioaccumulation / accumulation** Not available**Mobility in environmental media** Not available**Environmental effects** Harmful to aquatic life.**Aquatic toxicity** Not available**Partition coefficient** Not available**Chemical fate information** Not available**Other adverse effects** Not available**13. Disposal Considerations****Disposal instructions** Review federal, state/provincial, and local government requirements prior to disposal.**Waste from residues / unused products** Not available**Contaminated packaging** Not available

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## 14. Transport Information

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### U.S. Department of Transportation (DOT)

#### Basic shipping requirements:

Proper shipping name	Sulfuric acid
Hazard class	8
UN number	1830
Packing group	II
Additional information:	
Special provisions	A3, A7, B3, B83, B84, IB2, N34, T8, TP2, TP12
Packaging exceptions	154



### Transportation of Dangerous Goods (TDG - Canada)

#### Basic shipping requirements:

Proper shipping name	SULPHURIC ACID
Hazard class	8
UN number	1830
Packing group	II



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## 15. Regulatory Information

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### Canadian federal regulations

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

#### Canada - WHMIS - Ingredient Disclosure List

Sulfuric acid	7664-93-9	1 %
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#### WHMIS status

Controlled

#### WHMIS classification

Class D - Division 1A, Class E - Corrosive Material

#### WHMIS labeling



### Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical	Yes
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**US Federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities**

Sulfuric acid 7664-93-9 1000 Lb final RQ; 454 kg final RQ

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs**

Sulfuric acid 7664-93-9 1000 Lb EPCRA RQ

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs**

Sulfuric acid 7664-93-9 1000 Lb TPQ

**U.S. - CERCLA/SARA - Section 313 - Emission Reporting**

Sulfuric acid 7664-93-9 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

**U.S. - CWA (Clean Water Act) - Hazardous Substances**

Sulfuric acid 7664-93-9 Present

**CERCLA (Superfund) reportable quantity**

Sulphuric acid: 1000.0000

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**  
 Immediate Hazard - Yes  
 Delayed Hazard - No  
 Fire Hazard - No  
 Pressure Hazard - No  
 Reactivity Hazard - Yes

**Section 302 extremely hazardous substance** Yes

**Section 311 hazardous chemical** Yes

**Clean Air Act (CAA)** Not available

**Clean Water Act (CWA)** Hazardous substance

**State regulations** This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances**

Sulfuric acid 7664-93-9 Present

**U.S. - Illinois - Toxic Air Contaminant Carcinogens**

Sulfuric acid 7664-93-9 ACGIH Carcinogen

**U.S. - Illinois - Toxic Air Contaminants**

Sulfuric acid 7664-93-9 Present (aerosol)

**U.S. - Louisiana - Reportable Quantity List for Pollutants**

Sulfuric acid 7664-93-9 1000 Lb final RQ; 454 kg final RQ

**U.S. - Massachusetts - Right To Know List**

Sulfuric acid 7664-93-9 Extraordinarily hazardous

**U.S. - Minnesota - Hazardous Substance List**

Sulfuric acid 7664-93-9 Present

**U.S. - New Jersey - Right to Know Hazardous Substance List**

Sulfuric acid 7664-93-9 sn 1761

**U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances**

Sulfuric acid 7664-93-9 1000 Lb RQ (air); 100 lb RQ (land/water)

**U.S. - North Carolina - Control of Toxic Air Pollutants**

Sulfuric acid 7664-93-9 0.012 mg/m3 (chronic toxicants); 0.1 mg/m3 (acute systemic toxicants)

**U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities**

Sulfuric acid 7664-93-9 500 Lb TQ

**U.S. - Pennsylvania - RTK (Right to Know) List**

Sulfuric acid 7664-93-9 Environmental hazard

**U.S. - Rhode Island - Hazardous Substance List**

Sulfuric acid 7664-93-9 Toxic; Flammable

**Inventory name**

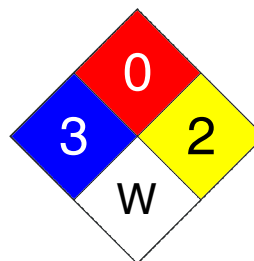
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## 16. Other Information

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 3
Flammability	0
Physical Hazard	2
Personal Protection	X



### Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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### Prepared by

Dell Tech Laboratories Ltd. (519) 858-5021

### Other information

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.

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.

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