

## SECTION 1: IDENTIFICATION

### Product Identifier

**Product Form:** Mixture

**Product Name:** Sulfuric Acid, 30 - 51%

**Formula:** H<sub>2</sub>SO<sub>4</sub>

### Intended Use of the Product

Industrial applications; battery electrolyte

**Use of the Substance/Mixture:** Industrial use.

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

#### **Manufacturer**

CHEMTRADE LOGISTICS INC.

155 Gordon Baker Road

Suite 300

Toronto, Ontario M2H 3N5

For SDS Info: (416) 496-5856

[www.chemtradelogistics.com](http://www.chemtradelogistics.com)

### Emergency Telephone Number

**Emergency Number :**

Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300

Chemtrade Emergency Contact: (866) 416-4404

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

## SECTION 2: HAZARDS IDENTIFICATION

### Classification of the Substance or Mixture

#### **GHS-US classification**

Skin Corr. 1A H314

Eye Dam. 1 H318

Aquatic Acute 3 H402

Full text of H-phrases: see section 16

### Label Elements

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

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



**Signal Word (GHS-US) :** Danger

**Hazard Statements (GHS-US) :** H314 - Causes severe skin burns and eye damage

H402 - Harmful to aquatic life

**Precautionary Statements (GHS-US) :** P260 - Do not breathe fume, mist, vapors, spray.

P264 - Wash hands and forearms thoroughly after handling.

P273 - Avoid release to the environment.

P280 - Wear eye protection, face protection, protective gloves, protective clothing.

P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - If on skin (or hair): 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.

P321 - Specific treatment (see section 4 on this SDS).

P363 - Wash contaminated clothing before reuse.

# Sulfuric Acid, 30 - 51%

## Safety Data Sheet

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

P405 - Store locked up.

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

### Other Hazards

**Other Hazards Not Contributing to the Classification:** Not available

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

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Name	Product identifier	% (w/w)	GHS-US classification
Sulfuric acid	(CAS No) 7664-93-9	30 - 51	Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### Description of First Aid Measures

**General:** IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** Using proper respiratory protection, immediately move the exposed person to fresh air. . Keep at rest and in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Seek immediate medical advice. Symptoms may be delayed.

**Skin Contact:** Remove/Take off immediately all contaminated clothing. Immediately flush skin with plenty of water for at least 60 minutes. Seek medical attention. Wash contaminated clothing before reuse.

**Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. Rinse mouth.

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

**General:** Corrosive. Causes burns.

**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:** Contact may cause immediate severe irritation progressing quickly to chemical burns.

**Eye Contact:** Contact may cause immediate severe irritation progressing quickly to chemical burns. Can cause blindness.

**Ingestion:** May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.

**Chronic Symptoms:** Repeated or prolonged inhalation may damage lungs. Prolonged and repeated contact will eventually cause permanent tissue damage.

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

If medical advice is needed, have product container or label at hand.

## SECTION 5: FIRE-FIGHTING MEASURES

### Extinguishing Media

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

**Unsuitable Extinguishing Media:** Do not get water inside containers. Do not apply water stream directly at source of leak. Do not use a heavy water stream. A direct water stream will cause violent splattering and generation of heat.

### Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not flammable. Under conditions of fire this material may produce: Sulphur oxides.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Reacts with water. Always add acid to water. Do NOT add water to acid!.

### Advice for Firefighters

**Precautionary Measures Fire:** Not available

**Firefighting Instructions:** Keep upwind. Use water spray or fog for cooling exposed containers.

# Sulfuric Acid, 30 - 51%

## Safety Data Sheet

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

**Protection During Firefighting:** Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat; cool adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines. Be aware that burning liquid will float on water. Notify appropriate authorities if liquid enter sewers or waterways.

**Hazardous Combustion Products:** Sulphur oxides.

**Other Information:** Do not allow run-off from fire fighting to enter drains or water courses.

### Reference to Other Sections

Refer to section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures** Not available

### For Non-Emergency Personnel

**Protective Equipment:** Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.

**Emergency Procedures:** Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area. Keep upwind.

### For Emergency Personnel

**Protective Equipment:** Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.

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

### Environmental Precautions

If spill could potentially enter any waterway, including intermittent dry creeks, contact the U.S. COAST GUARD NATIONAL RESPONSE CENTER at 800-424-8802. In case of accident or road spill notify CHEMTREC at 800-424-9300 (in USA) or CANUTEC at 613-996-6666 (in Canada). In other countries call CHEMTREC at (International code) +1-703-527-3887.

### 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:** Ventilate area. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Collect absorbed material and place into a sealed, labelled container for proper disposal. Practice good housekeeping - spillage can be slippery on smooth surface either wet or dry. Liquid spill: neutralize with powdered limestone or sodium bicarbonate.

### Reference to Other Sections

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Wash contaminated clothing before reuse.

### Conditions for Safe Storage, Including Any Incompatibilities

**Storage Conditions:** Detached outside storage is preferable.

**Incompatible Materials:** Reducing agents. Organic materials. Alkalis. Moisture.

**Storage Area:** Store in dry, cool area. Store in a well-ventilated place. Keep away from combustible materials.

### Specific End Use(s)

Industrial applications; battery electrolyteIndustrial use.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Sulfuric acid (7664-93-9)		
Mexico	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic fraction)
USA ACGIH	ACGIH chemical category	Suspected Human Carcinogen contained in strong inorganic acid mists

# Sulfuric Acid, 30 - 51%

## Safety Data Sheet

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

USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Alberta	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (Thoracic, contained in strong inorganic acid mists)
Manitoba	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic fraction)
New Brunswick	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic fraction)
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic fraction)
Nunavut	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup> (thoracic fraction)
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic fraction)
Ontario	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic)
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic fraction)
Québec	VECD (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup> (thoracic fraction)
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (thoracic fraction)
Yukon	OEL STEL (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>

### Exposure Controls

**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment:** Face shield. Gas mask at concentration in the air >> TLV. Corrosionproof clothing.

**Materials for Protective Clothing:** Acid-resistant clothing.

**Hand Protection:** Impermeable protective gloves.

**Eye Protection:** Face shield.

**Skin and Body Protection:** Wear suitable protective clothing. Chemical resistant suit. Rubber apron, boots.

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

**Environmental Exposure Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear
Odor	: Odorless to slight hydrocarbon and/or slight rotten eggs.
Odor Threshold	: Not available
pH	: 0.3
Freezing Point	: -37.4°C (-35.3°F) @30.79%; -55.2°C (-67.3°F) @ 39.92%; 36.4°C (33.5°F) @ 49.47%
Boiling Point	: 109°C (229°F) @ 32.05%; 118°C (244°F) @ 42.63%; 127°C (260°F) @ 50.87%
Flash Point	: Not available
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available

# Sulfuric Acid, 30 - 51%

## Safety Data Sheet

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

<b>Upper Flammable Limit</b>	: Not available
<b>Vapor Pressure</b>	: 0.52 @ 30%; 2.10 @ 40%; 4.60 @ 50%
<b>Relative Vapor Density at 20 °C</b>	: 3.4 air=1
<b>Relative Density</b>	: Not available
<b>Specific Gravity</b>	: 1.2288 @ 30.79%; 1.3063 @ 39.92%; 1.3942 @ 49.47%
<b>Solubility</b>	: Water: Soluble in cold and hot water. Acetone: Partially soluble. Organic solvent: Partially soluble in methanol.
<b>Partition Coefficient: N-Octanol/Water</b>	: Not available
<b>Viscosity</b>	: Not available
<b>Explosion Data – Sensitivity to Mechanical Impact</b>	: Not expected to present an explosion hazard due to mechanical impact.
<b>Explosion Data – Sensitivity to Static Discharge</b>	: Not expected to present an explosion hazard due to static discharge.

### SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** Reacts with water. Always add acid to water. Do NOT add water to acid!

**Chemical Stability:** Stable at standard temperature and pressure.

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

**Conditions to Avoid:** Protect from moisture.

**Incompatible Materials:** Avoid contact with most metals, carbides, hydrogen sulfide, turpentine, organic acids, combustibles (wood, paper, cotton) and other organic and readily oxidized materials.

**Hazardous Decomposition Products:** Under conditions of fire this material may produce: Sulphur oxides.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### Information on Toxicological Effects - Product

**Acute Toxicity:** Not classified

**LD50 and LC50 Data:** Not available

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

**pH:** 0.3

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

**pH:** 0.3

**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

**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:** Contact may cause immediate severe irritation progressing quickly to chemical burns.

**Symptoms/Injuries After Eye Contact:** Contact may cause immediate severe irritation progressing quickly to chemical burns. Can cause blindness.

**Symptoms/Injuries After Ingestion:** May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.

**Chronic Symptoms:** Repeated or prolonged inhalation may damage lungs. Prolonged and repeated contact will eventually cause permanent tissue damage.

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

**LD50 and LC50 Data:**

<b>Sulfuric acid (7664-93-9)</b>	
<b>LD50 Oral Rat</b>	2140 mg/kg
<b>LC50 Inhalation Rat (mg/l)</b>	510 mg/m <sup>3</sup> (Exposure time: 2 h)

# Sulfuric Acid, 30 - 51%

## Safety Data Sheet

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

ATE US (oral)	2140.000 mg/kg body weight
ATE US (vapors)	510.000 mg/l/4h
ATE US (dust, mist)	0.347 mg/l/4h
<b>Sulfuric acid (7664-93-9)</b>	
IARC Group	1
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity Not classified

<b>Sulfuric acid (7664-93-9)</b>	
LC50 Fish 1	500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
LC 50 Fish 2	42 mg/l (Exposure time: 96 h - Species: Gambusia affinis [static])

### Persistence and Degradability

<b>Sulfuric Acid, 30 - 51%</b>	
Persistence and Degradability	Product is biodegradable.

### Bioaccumulative Potential

<b>Sulfuric Acid, 30 - 51%</b>	
Bioaccumulative Potential	Not expected to bioaccumulate.

<b>Sulfuric acid (7664-93-9)</b>	
BCF Fish 1	(no bioaccumulation)

### Mobility in Soil Not available

### Other Adverse Effects Not available

## SECTION 13: DISPOSAL CONSIDERATIONS

**Sewage Disposal Recommendations:** This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

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

## SECTION 14: TRANSPORT INFORMATION

### 14.1 In Accordance with DOT

Proper Shipping Name : SULFURIC ACIDwith not more than 51% acid  
Hazard Class : 8  
Identification Number : UN2796  
Label Codes : 8  
Packing Group : II  
ERG Number : 157



### 14.2 In Accordance with IMDG

Proper Shipping Name : SULPHURIC ACID  
Hazard Class : 8  
Identification Number : UN2796  
Packing Group : II  
Label Codes : 8  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-B



### 14.3 In Accordance with IATA

Proper Shipping Name : SULPHURIC ACID  
Packing Group : II  
Identification Number : UN2796  
Hazard Class : 8  
Label Codes : 8  
ERG Code (IATA) : 8L



# Sulfuric Acid, 30 - 51%

## Safety Data Sheet

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

### 14.4 In Accordance with TDG

**Proper Shipping Name** : SULPHURIC ACID with not more than 51 per cent acid  
**Packing Group** : II  
**Hazard Class** : 8  
**Identification Number** : UN2796  
**Label Codes** : 8



## SECTION 15: REGULATORY INFORMATION



### US Federal Regulations

Sulfuric Acid, 30 - 51%	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard Delayed (chronic) health hazard Reactive hazard
Sulfuric acid (7664-93-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on the United States SARA Section 302 Subject to reporting requirements of United States SARA Section 313	
<b>SARA Section 302 Threshold Planning Quantity (TPQ)</b>	1000
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard Delayed (chronic) health hazard
<b>SARA Section 313 - Emission Reporting</b>	1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

### US State Regulations

Sulfuric Acid, 30 - 51%( )	
Sulfuric acid (7664-93-9)	
<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer.
Sulfuric acid (7664-93-9)	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List	

### Canadian Regulations

Sulfuric Acid, 30 - 51%	
<b>WHMIS Classification</b>	Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material
 	
Sulfuric acid (7664-93-9)	
Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
<b>WHMIS Classification</b>	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class E - Corrosive Material Class D Division 2 Subdivision B - Toxic material causing other 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.

# Sulfuric Acid, 30 - 51%

## Safety Data Sheet

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

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

**Revision date** : 05/31/2016  
**Indication of Changes** : Revision date, Section 9, Freezing Point revision  
**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:

Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H402	Harmful to aquatic life

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

CHEMTRADE LOGISTICS, INC.

For SDS Info: (416) 496-5856

*Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA'S "Right to Know" (29 CFR 1910.1200) and Canada's WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Chemtrade and its affiliates assume no responsibility. Chemtrade is a member of the CIAC (Chemistry Industry Association of Canada) and adheres to the codes and principles of Responsible Care™.*



Chemtrade NA GHS SDS