

SAFETY DATA SHEET

Preparation Date: 06/10/2015

Revision Date: 06/10/2015

Revision Number: G1

Product identifier

Product code: S1750
Product Name: SULFUROUS ACID, REAGENT, ACS

Other means of identification

Synonyms: Sulphurous acid
Sulfur dioxide solution
CAS #: 7782-99-2
RTECS # WT2775000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Chemical intermediate.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Label elements

Danger**Hazard statements**

Causes severe skin burns and eye damage

**Hazards not otherwise classified (HNOC)**

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see .? on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]	39365-88-3	100	*

4. FIRST AID MEASURES**First aid measures****General Advice:**

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

4. FIRST AID MEASURES

Skin Contact:	Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.
Eye Contact:	Flush eye with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.
Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Ingestion:	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Symptoms	Severe skin and eye irritation or burns. Redness and burning sensation of the skin, pain, blisters. Redness, pain and burns of the eyes. Blurred vision. Burning sensation in the mouth and stomach. Can burn mouth, throat, and stomach. Burning pain in the mouth, throat, stomach. Ulceration/burning of the mouth, throat, stomach. Vomiting. Nausea. May cause hypermotility, diarrhea. Severe irritation of the upper respiratory tract. Coughing. Dyspnea (Shortness of breath and difficulty breathing). May cause build-up of fluid in the lungs (pulmonary edema). May cause metabolic acidosis.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician:	Treat symptomatically
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Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:	The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.
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Unsuitable Extinguishing Media:	No information available.
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Specific hazards arising from the chemical

Hazardous Combustion Products:	If it is involved in a fire, it can cause evolution of Sulfur oxides (sulfur dioxide gas)
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Specific hazards:	Nonflammable
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Special Protective Actions for Firefighters

Specific Methods:	No information available.
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Special Protective Equipment for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin, eyes and clothing. Use personal protective equipment.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk.

Methods for cleaning up Neutralize with Sodium carbonate. Dilute with water. Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice:

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not ingest. Do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store in a segregated and approved area. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents. Metals. Bases. Alkalis. Halogens. acetylides.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]	None	None	None	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]	None	None	None	None

Australia and Mexico

Components	Australia	Mexico
Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]	None	None

Appropriate engineering controls

Engineering measures to reduce exposure: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Goggles and Face-shield
- Skin and body protection:** Chemical resistant protective suit. Gloves. boots.
- Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical state: Liquid.	Appearance: No information available	Color: Colorless.
Odor: Pungent. Sulfurous. Sulfur dioxide odor.	Taste No information available	Molecular/Formula weight: No information available
Formula: No information available	Flammability: Non-flammable	Flash point (°C): No data available
Flashpoint (°C/°F): No information available.	Flash Point Tested according to: Not available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Autoignition Temperature (°C/°F): No information available	pH: < 2
Melting point/range(°C/°F): No information available	Boiling point/range(°C/°F): No information available	Decomposition temperature(°C/°F): No information available
Bulk density: No information available	Specific gravity: 1.03	Vapor pressure @ 20°C (kPa): 2.3 (Water)
Density (g/cm3): No information available	Evaporation rate: No information available	Vapor density: 1.3
VOC content (g/L): No information available	Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available
Viscosity: No information available	Miscibility: No information available	Solubility: Easily soluble in cold water Easily soluble in hot water Soluble in Methanol Soluble in diethyl ether Soluble in Acetone

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents, metals, alkalis
Reactive with halogens

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Incompatible materials.

Incompatible Materials: Oxidizing agents. Metals. Bases. Alkalis. Halogens. acetylides.

Hazardous decomposition products: Sulfur dioxide gas.

Other Information

Corrosivity: Extremely corrosive in presence of copper
Slightly corrosive in presence of aluminum
Slightly corrosive in presence of stainless steel (304)
Slightly corrosive in presence of stainless steel (316)
Non-corrosive in the presence of glass

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

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

Acute Toxicity

Component Information

Sulfurous acid (CAS no. 7782-99-2)
[Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)] -

LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LD50/dermal/rat = No information available
LD50/dermal/rabbit = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Corrosive. Causes severe irritation and burns. Can cause redness and pain. It can be absorbed through the skin.

Eye Contact: Corrosive. Severe eye irritation. Redness and pain. Causes burns. May cause blurred vision.

Inhalation Mist and vapors cause severe irritation of respiratory tract and its mucous membrane. Can cause shortness of breath and difficulty breathing. Can cause systemic acidosis or pulmonary edema at moderate concentrations.

Ingestion Corrosive to the mouth, throat and esophagus with immediate pain and burning. Causes severe irritation burns of digestive tract. Causes nausea, vomiting, hypermotility, and diarrhea. Uncontrolled vomiting may occur.

Aspiration hazard No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Repeated exposure can irritate the lungs, may cause bronchitis to develop with cough, phlegm, and or shortness of breath. It may cause damage to the tissue of the mucous membrane, upper respiratory tract, eyes and skin.

Sensitization: No information available

Mutagenic Effects: For Sulfur dioxide:
May affect genetic material
Mutations in microorganisms
Experiments with bacteria and/or yeast have shown mutagenic effects
Experiments with human lymphocytes have shown mutagenic effects

Carcinogenic effects: Not considered carcinogenic

Components	ACGIH - Carcinogens	IARC	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity No data is available

Reproductive Effects: For Sulfur dioxide: Inhalation of Sulfur dioxide gas may cause adverse reproductive effects (maternal and paternal) based on animal data.

Developmental Effects: For Sulfur dioxide: Inhalation of Sulfur dioxide gas may cause adverse effects on developing fetus. A significant risk to developing fetus is associated with maternal exposure to Sulfur dioxide gas by inhalation.

Teratogenic Effects: May cause birth defects (teratogenic effects)

Specific Target Organ Toxicity

STOT - single exposure No information available

STOT - repeated exposure No information available

Target Organs: Lungs.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN1833
Proper Shipping Name: Sulfurous acid (Solution)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
ERG No: 154
Marine Pollutant: No data available
DOT RQ (lbs): No information available

Symbol(s):

TDG (Canada)

UN-No: UN1833
Proper Shipping Name: Sulfurous acid (Solution)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Description: No information available

ADR

UN-No: UN1833
Proper Shipping Name: Sulphurous acid (Solution)
Hazard Class: 8

14. TRANSPORT INFORMATION

Packing Group: II
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

UN-No: UN1833
Proper Shipping Name: Sulphurous acid (Solution)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
EMS: F-A
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: UN1833
Proper Shipping Name: Sulphurous acid (Solution)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Classification Code: No information available
Description: No information available

ICAO

UN-No: UN1833
Proper Shipping Name: Sulphurous acid (Solution)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Description: No information available

IATA

UN-No: UN1833
Proper Shipping Name: Sulphurous acid (Solution)
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
ERG Code: 8L
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]</i>	Present	Present KE-32671	Present	Present (1)-309	Present	Present	Present 231-973-1

U.S. Regulations

Product code: S1750

Product name: SULFUROUS ACID, REAGENT, ACS

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Sulfurous acid (CAS no. 7782-99-2)
 [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]

New Jersey RTK Hazardous Substance List: 1764

FDA - 21 CFR - Total Food Additives 73.85

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]	None	None	None	None	None

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]	Not Applicable	Not Applicable

Canada

WHMIS hazard class:

E Corrosive material

Sulfurous acid (CAS no. 7782-99-2)

[Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]

E

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]	1 %

Inventory

Product code: S1750

Product name: SULFUROUS ACID,
REAGENT, ACS

Components	Canada (DSL)	Canada (NDSL)
Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]	Not listed	Not listed

EU Classification

R-phrase(s)

R34 - Causes burns.

S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Components	Classification	Concentration Limits:	Safety Phrases
Sulfurous acid (CAS no. 7782-99-2) [Consists of 94% water (CAS no. 7732-18-5) and 6% Sulfur dioxide(CAS no. 7446-09-5)]		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

C - Corrosive.



16. OTHER INFORMATION

16. OTHER INFORMATION

Preparation Date: 06/10/2015
Revision Date: 06/10/2015
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet