

1. Identification

Product identifier	SULFUROUS ACID, 6%, REAGENT (ACS)	
Other means of identification		
Product code	1109	
Recommended use	professional, scientific and technical activities: other professional, scientific and technical activities	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Company name	GFS Chemicals, Inc.	
Address	P.O. Box 245 Powell OH 43065 US	
Telephone	Phone	740-881-5501
	Toll Free	800-858-9682
	Fax	740-881-5989
Website	www.gfschemicals.com	
E-mail	service@gfschemicals.com	
Emergency phone number	Emergency Assistance	Chemtrec 800-424-9300

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
OSHA hazard(s)	Not classified.	
Label elements		



Signal word	Danger	
Hazard statement	Causes severe skin burns and eye damage. Causes serious eye damage.	
Precautionary statement		
Prevention	Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.	
Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
Storage	Store locked up.	
Disposal	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.	
Hazard(s) not otherwise classified (HNOC)	Not classified.	

3. Composition/information on ingredients

Mixtures

Non-hazardous components		
Chemical name	CAS number	%
WATER	7732-18-5	90 - 100
SULFUR DIOXIDE	7446-09-5	5 - < 10

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician or poison control center immediately.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. For minor skin contact, avoid spreading material on unaffected skin.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Corrosive effects. Irritation of eyes and mucous membranes. May cause temporary blindness and severe eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Indication of immediate medical attention and special treatment needed	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed. Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Use extinguishing agent suitable for type of surrounding fire. Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Irritating, corrosive and/or toxic gases or fumes will be released during a fire.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak. Keep upwind. Keep out of low areas. Ensure adequate ventilation. Wear appropriate personal protective equipment.
Methods and materials for containment and cleaning up	<p>This product is miscible in water. Prevent entry into waterways, sewers, basements or confined areas.</p> <p>Large Spills: Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Neutralize spilled material with crushed limestone, soda ash or lime. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas. Clean up in accordance with all applicable regulations.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills in original containers for re-use. For waste disposal, see section 13 of the MSDS.</p>
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not breathe mist or vapor. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. Wash hands thoroughly after handling.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep container tightly closed. Keep out of the reach of children. Keep container tightly closed in a cool, well-ventilated place. Store in a cool, dry place out of direct sunlight.

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls	Provide eyewash station.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Chemical goggles are recommended.
Skin protection	
Hand protection	Wear protective gloves.
Other	Wear appropriate chemical resistant clothing. It may provide little or no thermal protection. Wear protective gloves.
Respiratory protection	Wear suitable respiratory protection. In case of insufficient ventilation wear suitable respiratory equipment.
Thermal hazards	Not available.
General hygiene considerations	When using, do not eat, drink or smoke. Do not get in eyes. Do not get this material in contact with skin. Do not get this material on clothing. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	Clear.
Physical state	Liquid.
Form	Liquid.
Color	Colorless.
Odor	Sulfur dioxide odor.
Odor threshold	Not available.
pH	Acidic.
Initial boiling point and boiling range	SO ₂ readily released on heating
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor density	1.3 air = 1
Relative density	Not available.
Solubility(ies)	Miscible.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.03 g/cm ³
Molecular formula	H ₂ SO ₃
Molecular weight	82.08 g/mol
Percent volatile	100 %
Specific gravity	1.03

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Stable at normal conditions. No hazardous self-reactivity.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

Conditions to avoid	Elevated temperatures.
Incompatible materials	Aluminum. Oxidizing agents. Ammonia. Halogens. Acetylides.
Hazardous decomposition products	Pungent suffocating gas evolved.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Causes digestive tract burns.
Inhalation	May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns.
Eye contact	Causes severe eye burns. Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics
 Burning pain and severe corrosive skin damage. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Causes severe skin burns and eye damage.

Product	Species	Test Results
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SULFUROUS ACID (CAS Mixture)

Acute

Inhalation

LC50	Guinea pig	9040 mg/l
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Components	Species	Test Results
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SULFUR DIOXIDE (CAS 7446-09-5)

Acute

Inhalation

LC50	Guinea pig	1000 mg/l, 20 h 130 mg/l, 154 h
	Mouse	1000 mg/l, 4 h 150 mg/l, 847 h

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes severe eye burns. Causes serious eye damage.
Respiratory sensitization	Due to lack of data the classification is not possible.
Skin sensitization	Due to lack of data the classification is not possible.
Germ cell mutagenicity	Due to lack of data the classification is not possible.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

SULFUR DIOXIDE (CAS 7446-09-5)	3 Not classifiable as to carcinogenicity to humans.
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Reproductive toxicity	Due to lack of data the classification is not possible.
Specific target organ toxicity - single exposure	Due to lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Due to lack of data the classification is not possible.
Aspiration hazard	Due to lack of data the classification is not possible.

12. Ecological information

Ecotoxicity	No ecotoxicity data noted for the ingredient(s).
Persistence and degradability	None known.
Bioaccumulative potential	Not available.
Mobility in soil	Not available.
Other adverse effects	Not available.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Neutralize with soda ash/slaked lime and discharge to sewer with lots of water. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Not available.
Hazardous waste code	D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1833
UN proper shipping name	Sulfurous acid
Transport hazard class(es)	8
Subsidiary class(es)	Not available.
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Labels required	8
Special provisions	B3, IB2, T7, TP2
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	UN1833
UN proper shipping name	Sulphurous acid
Transport hazard class(es)	8
Subsidiary class(es)	-
Packaging group	II
Environmental hazards	No
Labels required	Not available.
ERG Code	8L
Special precautions for user	Not available.

IMDG

UN number	UN1833
UN proper shipping name	SULPHUROUS ACID
Transport hazard class(es)	8
Subsidiary class(es)	-
Packaging group	II
Environmental hazards	
Marine pollutant	No
Labels required	Not available.
EmS	F-A, S-B
Special precautions for user	Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations CERCLA/SARA Hazardous Substances - Not applicable.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not on regulatory list.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

SULFUR DIOXIDE (CAS 7446-09-5)

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US. Massachusetts RTK - Substance List

SULFUR DIOXIDE (CAS 7446-09-5)

US. New Jersey Worker and Community Right-to-Know Act

SULFUR DIOXIDE (CAS 7446-09-5) 500 LBS

US. Pennsylvania RTK - Hazardous Substances

SULFUR DIOXIDE (CAS 7446-09-5)

US. Rhode Island RTK

SULFUR DIOXIDE (CAS 7446-09-5)

US. California Proposition 65**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

SULFUR DIOXIDE (CAS 7446-09-5)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other information, including date of preparation or last revision**Issue date** August-28-2013**Version #** 01**Further information** Not available.

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Information Product and Company Identification: Product Codes
Physical & Chemical Properties: Multiple Properties
Transport Information: Proper Shipping Name/Packing Group