

MSDS Number: **S8306** * * * * * *Effective Date: 08/18/05* * * * * * *Supersedes: 08/10/04*



From: Mallinckrodt Baker, Inc.
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Phillipsburg, NJ 08865



24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

SULFUROUS ACID

1. Product Identification

Synonyms: Sulfur dioxide solution; Sulphurous acid

CAS No.: 7782-99-2

Molecular Weight: 82.07

Chemical Formula: SO₂ in H₂O (6 - 12% solution)

Product Codes:

J.T. Baker: 0370, 0371

Mallinckrodt: 2920

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Hazardous		
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Sulfurous Acid	7782-99-2	6 - 12%
Yes		

3. Hazards Identification

Emergency Overview

**DANGER! CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT.
HARMFUL IF SWALLOWED OR INHALED.**

SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 3 - Severe

Flammability Rating: 0 - None

Reactivity Rating: 2 - Moderate

Contact Rating: 4 - Extreme (Corrosive)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD;
PROPER GLOVES

Storage Color Code: White (Corrosive)

Potential Health Effects

Inhalation:

Mists and vapors cause irritation of respiratory tract. Can cause systemic acidosis or pulmonary edema at moderate concentrations.

Ingestion:

Corrosive to the mouth, throat and esophagus, with immediate pain and burning. Uncontrolled vomiting may occur.

Skin Contact:

Corrosive. Symptoms of redness, pain, and severe burn can occur.

Eye Contact:

Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns.

Chronic Exposure:

Repeated exposure may cause damage to the tissues of the mucous membranes, upper respiratory tract, eyes and skin.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders or impaired respiratory function may be more susceptible to the effects of the substance.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Fire:

Not considered to be a fire hazard. Releases sulfur dioxide on heating.

Explosion:

Contact with most metals causes formation of flammable and explosive hydrogen gas.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Neutralize with alkaline material (soda ash, lime), then absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

J. T. Baker NEUTRASORB® or TEAM® 'Low Na+' acid neutralizers are recommended for spills of this product.

7. Handling and Storage

Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Protect from physical damage. Keep out of direct sunlight and away from heat, water, and incompatible materials. Do not wash out container and use it for other purposes.

When diluting, always add the acid to water; never add water to the acid. When opening metal containers, use non-sparking tools because of the possibility of hydrogen gas being present. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established for solution.

Sulfur Dioxide [7446-09-5]:

-OSHA Permissible Exposure Limit (PEL):

2 ppm (TWA)

-ACGIH Threshold Limit Value (TLV):

2 ppm (TWA), 5 ppm (STEL)

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to the substance is apparent and engineering controls are not feasible, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

Clear almost colorless solution.

Odor:

Pungent odor of sulfur dioxide.

Solubility:

Miscible in water.

Specific Gravity:

1.03

pH:

No information found.

% Volatiles by volume @ 21C (70F):

No information found.

Boiling Point:

No information found.

Melting Point:

No information found.

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

No information found.

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage. Gradually oxidizes in air to sulfuric acid.

Hazardous Decomposition Products:

Burning may produce sulfur oxides.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Oxidizing agents, alkalis, compounds easily reduced.

Conditions to Avoid:

No information found.

11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

Ingredient Category	---NTP Carcinogen---		IARC
	Known	Anticipated	
Sulfurous Acid (7782-99-2)	No	No	
None			

12. Ecological Information

Environmental Fate:

No information found.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: SULFUROUS ACID

Hazard Class: 8

UN/NA: UN1833

Packing Group: II

Information reported for product/size: 2.5L

International (Water, I.M.O.)

Proper Shipping Name: SULPHUROUS ACID

Hazard Class: 8

UN/NA: UN1833

Packing Group: II

Information reported for product/size: 2.5L

International (Air, I.C.A.O.)

Proper Shipping Name: SULPHUROUS ACID

Hazard Class: 8

UN/NA: UN1833

Packing Group: II

Information reported for product/size: 2.5L

15. Regulatory Information

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-----\Chemical Inventory Status - Part 1\-----
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Ingredient                                TSCA  EC   Japan
Australia
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Sulfurous Acid (7782-99-2)                Yes  Yes  Yes
Yes
  
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-----\Chemical Inventory Status - Part 2\-----
-----
Ingredient                                Korea  DSL  NDSL
Phil.
-----
Sulfurous Acid (7782-99-2)                Yes   Yes  No
Yes
  
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-----\Federal, State & International Regulations - Part 1\-----
-----
313-----
Ingredient                                -SARA 302-  -----SARA
Chemical Catg.                            RQ      TPQ      List
-----
Sulfurous Acid (7782-99-2)                No     No     No
No
  
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-----\Federal, State & International Regulations - Part 2\-----
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TSCA-
Ingredient                                CERCLA  261.33  8(d)
-----
Sulfurous Acid (7782-99-2)                No      No      No
  
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Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
 SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No
 Reactivity: No (Pure / Liquid)

Australian Hazchem Code: 2R
Poison Schedule: None allocated.
WHMIS:

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

16. Other Information

NFPA Ratings: Health: **3** Flammability: **0** Reactivity: **0**

Label Hazard Warning:

DANGER! CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT.
HARMFUL IF SWALLOWED OR INHALED.

Label Precautions:

Do not breathe vapor or mist.
Do not get in eyes, on skin, or on clothing.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.

Label First Aid:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. In all cases get medical attention immediately.

Product Use:

Laboratory Reagent.

Revision Information:

MSDS Section(s) changed since last revision of document include: 3.

Disclaimer:

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