

**Sulfuric Acid (77 to 100%)**

Version 3.0

Revision Date 08/01/2015

Ref. 15000002271

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Sulfuric Acid (77 to 100%)
Product Use	:	Raw material, Manufacture of inorganic basic chemicals, Catalyst for oil refining industry, For the manufacturing of pharmaceutical products., Textile products (incl. nonwoven fabric processing) - Bleaching agents, discharging agents, Paper and board products - Bleaching agents, stabilizers for bleaching bath, Chemical plating of metals
Restrictions on use	:	Not to be used as a biocidal product., Not to be used as a drain cleaner., Not to be used as a direct component of a cleaning product., Not to be used for cleaning sludge out of oil tanks.
Supplier	:	Skyhawk Chemicals, Inc. 701 N. Post Oak Rd., Ste. 540 Houston, TX 77024 Phone: 713-957-2200 / 800-535-2847 Fax: 713-957-0345 Email: order@skyhawkchemicals.com
Emergency Contact	:	CHEMTREC USA 800-424-9300 ACCT#: CCN721839

SECTION 2. HAZARDS IDENTIFICATION**Product hazard category**

Acute toxicity (Inhalation)	Category 1
Acute toxicity (Dermal)	Category 4
Skin corrosion	Category 1A
Serious eye damage/eye irritation	Category 1

Safety Data Sheet

Sulfuric Acid (77 to 100%)

Version 3.0

Revision Date 08/01/2015

Ref. 15000002271

Carcinogenicity	Category 2
Specific target organ toxicity - single exposure	Category 1
Specific target organ toxicity - repeated exposure	Category 1

Label content

Pictogram

:



Signal word

: Danger

Hazardous warnings

: Harmful in contact with skin.
Causes severe skin burns and eye damage.
Fatal if inhaled.
Suspected of causing cancer.
Causes damage to organs. (Respiratory system)
Causes damage to organs through prolonged or repeated exposure.
(Respiratory system)

Safety Data Sheet

Sulfuric Acid (77 to 100%)

Version 3.0

Revision Date 08/01/2015

Ref. 15000002271

Hazardous prevention measures

: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Use personal protective equipment as required.
Wear respiratory protection.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing.
Rinse skin with water/ shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed: Call a POISON CENTER or doctor/ physician.
Immediately call a POISON CENTER/doctor.
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/ container to an approved waste disposal plant.

Other hazards

No applicable data available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Sulfuric Acid	7664-93-9	77 - 100 %

Safety Data Sheet

Sulfuric Acid (77 to 100%)

Version 3.0

Revision Date 08/01/2015

Ref. 15000002271

Water	7732-18-5	0 - 23 %
-------	-----------	----------

SECTION 4. FIRST AID MEASURES

- General advice : When symptoms persist or in all cases of doubt seek medical advice.
- Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
- Skin contact : Wash off with plenty of water. Remove contaminated clothing and shoes. Consult a physician. Wash contaminated clothing before re-use. Discard contaminated shoes.
- Eye contact : Immediately flush eyes for at least 15 minutes. Get medical attention.
- Ingestion : Do NOT induce vomiting. Immediately give large quantities of water to drink. Call a physician immediately. Never give anything by mouth to an unconscious person.
- Most important symptoms/effects, acute and delayed : No applicable data available.
- Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : No applicable data available.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : The product itself does not burn., Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Safety Data Sheet

Sulfuric Acid (77 to 100%)

Version 3.0

Revision Date 08/01/2015

Ref. 15000002271

- Unsuitable extinguishing media : None known.
- Specific hazards : Does not readily burn or support combustion.
- Special protective equipment for firefighters : No applicable data available.
- Further information : Do not get water inside any containers.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

- Safeguards (Personnel) : Use personal protective equipment. Keep people away from and upwind of spill/leak.
- Environmental precautions : Try to prevent the material from entering drains or water courses.
- Spill Cleanup : Clean-up methods - small spillage
Soak up with sand, oil dry, or other noncombustible absorbent materials.
Clean-up methods - large spillage
Dam up.
Carefully apply fine water mist or mid-expansion foam to slowly dilute to non-fuming sulfuric acid. This process may release sulfuric acid mists into the air.

Neutralize with: lime soda ash other alkali material
- Accidental Release Measures : No applicable data available.

SECTION 7. HANDLING AND STORAGE

- Handling (Personnel) : Do not get in eyes. Do not get on skin or clothing. Do not breathe vapours or spray mist. Wash hands thoroughly after handling.

Safety Data Sheet

Sulfuric Acid (77 to 100%)

Version 3.0

Revision Date 08/01/2015

Ref. 15000002271

- Handling (Physical Aspects) : No applicable data available.
Dust explosion class : No applicable data available.
Storage : Keep containers dry and tightly closed to avoid moisture absorption and contamination. Protect containers from damage. Never allow product to get in contact with water during storage.
Never allow product to get in contact with water during storage.
- Storage period : No applicable data available.
- Storage temperature : No applicable data available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection : Wear NIOSH approved respiratory protection as appropriate.

Eye protection : Wear chemical splash goggles in combination with a full-length face shield or an acid hood.

Skin and body protection : Where there is potential for skin contact have available and wear as appropriate:
Full body chemical protective clothing.
Chemical-resistant gloves
Chemical-resistant boots

Protective measures : All Personal Protection Equipment should be checked before use to confirm it is compatible with the chemicals you are handling.

Exposure Guidelines

Exposure Limit Values

Sulfuric Acid			
Permissible exposure limit:	(OSHA)	1 mg/m ³	8 hr. TWA
TLV	(ACGIH)	0.2 mg/m ³	TWA Thoracic fraction.

Safety Data Sheet

Sulfuric Acid (77 to 100%)

Version 3.0

Revision Date 08/01/2015

Ref. 15000002271

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state : liquid
Form : liquid, oily
Color : colourless, to, light grey

Odor : acrid

Odor threshold : No applicable data available.

pH : < 1

Melting point/freezing point : Freezing point
-35 - 11 °C (-31 - 52 °F)

Boiling point/boiling range : Boiling point/boiling range
193 - 327 °C (379 - 621 °F) at 760 mm Hg

Flash point : does not flash

Evaporation rate : < 1
(Butyl Acetate=1.0)

Flammability (solid, gas) : No applicable data available.

Upper explosion limit : No applicable data available.

Lower explosion limit : No applicable data available.

Vapor pressure : < 0.3 mm Hg at 25 °C (77 °F)
: < 0.6 mm Hg at 38 °C (100 °F)

Vapor density : 3.4
(Air = 1.0)

Specific gravity (Relative density) : 1.706 - 1.844 at 15.6 °C (60.1 °F)

Safety Data Sheet

Sulfuric Acid (77 to 100%)

Version 3.0

Revision Date 08/01/2015

Ref. 15000002271

Water solubility	: completely soluble, Reacts violently with water liberating sulfuric acid mist cloud.
Solubility(ies)	: No applicable data available.
Partition coefficient: n-octanol/water	: No applicable data available.
Auto-ignition temperature	: No applicable data available.
Decomposition temperature	: No applicable data available.
Viscosity, kinematic	: No applicable data available.
Viscosity, dynamic	: No applicable data available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable under recommended storage conditions.
Chemical stability	: Stable at normal temperatures and storage conditions.
Possibility of hazardous reactions	: Reacts violently with water.
Conditions to avoid	: Avoid excessive heat.
Incompatible materials	: Water Organic materials, nitrates, chlorates, perchlorates, carbides, picrates, strong oxidizers, Reducing agents, Powdered metals, Cyanides, sulphides
Hazardous decomposition products	: Hazardous decomposition products: Sulphur dioxide

SECTION 11. TOXICOLOGICAL INFORMATION

Sulfuric Acid	
Inhalation 4 h LC50	: 0.375 mg/l , Rat Target Organs: Respiratory system Respiratory effects

Safety Data Sheet

Sulfuric Acid (77 to 100%)

Version 3.0

Revision Date 08/01/2015

Ref. 15000002271

Dermal LD50	:	2,000 mg/kg , Rabbit
Oral LD50	:	2,140 mg/kg , Rabbit
Skin irritation	:	Corrosive after 3 minutes or less of exposure, Rabbit
Eye irritation	:	Corrosive, Rabbit
Skin sensitization	:	Does not cause skin sensitisation., Not tested on animals Does not cause respiratory sensitisation., human
Repeated dose toxicity	:	Inhalation Rat - 28 dMethod: OECD Test Guideline 412 No toxicologically significant effects were found.
Carcinogenicity	:	Suspected human carcinogens An increased risk of cancer in humans has been shown in workplace-based studies.
Mutagenicity	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Evidence suggests this substance does not cause genetic damage in animals.
Reproductive toxicity	:	No toxicity to reproduction Evidence suggests the substance is not a reproductive toxin in animals.
Teratogenicity	:	Animal testing showed no developmental toxicity.

Carcinogenicity

The carcinogenicity classifications for this product and/or its ingredients have been determined according to HazCom 2012, Appendix A.6. The classifications may differ from those listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or those found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition).

Safety Data Sheet

Sulfuric Acid (77 to 100%)

Version 3.0

Revision Date 08/01/2015

Ref. 15000002271

Material	IARC	NTP	OSHA
Sulfuric Acid	1	X	

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity
Sulfuric Acid

96 h LC50	:	Lepomis macrochirus (Bluegill sunfish) 16 mg/l
72 h ErC50	:	Desmodesmus subspicatus (green algae) > 100 mg/l OECD Test Guideline 201
48 h EC50	:	Daphnia magna (Water flea) > 100 mg/l OECD Test Guideline 202
65 d	:	NOEC Fish (unspecified species) 0.025 mg/l

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods - Product : In accordance with local and national regulations. Discarded material is a RCRA Hazardous Waste.

Contaminated packaging : No applicable data available.

SECTION 14. TRANSPORT INFORMATION

DOT	UN number	:	1830
	Proper shipping name	:	Sulfuric acid
	Class	:	8
	Packing group	:	II
	Labelling No.	:	8
IATA_C	UN number	:	1830

Safety Data Sheet

Sulfuric Acid (77 to 100%)

Version 3.0

Revision Date 08/01/2015

Ref. 15000002271

	Proper shipping name	: Sulphuric acid
	Class	: 8
	Packing group	: II
	Labelling No.	: 8
IMDG	UN number	: 1830
	Proper shipping name	: SULPHURIC ACID
	Class	: 8
	Packing group	: II
	Labelling No.	: 8

SECTION 15. REGULATORY INFORMATION

TSCA : On the inventory, or in compliance with the inventory

SARA 313 Regulated Chemical(s) : Sulfuric Acid

Sulfuric Acid

PA Right to Know Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): Sulfuric Acid

NJ Right to Know Regulated Chemical(s) : Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): Sulfuric Acid

SARA Reportable Quantity : 1000 lbs
Based on the percentage composition of this chemical in the product.:
Sulphuric acid

California Prop. 65 : WARNING! This product contains a chemical or chemicals known to the State of California to cause cancer. Sulfuric Acid

Safety Data Sheet

Sulfuric Acid (77 to 100%)

Version 3.0

Revision Date 08/01/2015

Ref. 15000002271

SECTION 16. OTHER INFORMATION

Revision Date : 08/01/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. 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.

Significant change from previous version is denoted with a double bar.