



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

Issuing Date: 22-Feb-2013

Revision Date: 11-Jun-2025

Version: 3

1. Identification

Product identifier

Product Name Sulfuric Acid 66'

Other means of identification

Product Code 1783

UN/ID No UN1830

Synonyms Oil of vitriol; sulphuric acid

Recommended use of the chemical and restrictions on use

Recommended Use Industrial, Manufacturing or Laboratory use.

Restrictions on Use None known

Details of the supplier of the safety data sheet

Manufacturer Address

Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
(612) 331-6910

E-mail

SDS@hawkinsinc.com for SDS questions. All others contact
customer.service@hawkinsinc.com

Emergency Telephone:

CHEMTREC: 1-800-424-9300 (US) / +1 703-741-5970 (International)

2. Hazard(s) identification

Classification of the substance or mixture

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1A

Hazards not otherwise classified (HNOc)

Not applicable

Label elements



Danger

Hazard statements

May be corrosive to metals.

Causes severe skin burns and eye damage.
May cause cancer.

Precautionary Statements - Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves, protective clothing, eye protection and face protection.
Do not breathe dust.
Wash face, hands and any exposed skin thoroughly after handling.
Keep only in original packaging.

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER or doctor.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Absorb spillage to prevent material damage.

Precautionary Statements - Storage

Store locked up.
Store in corrosion resistant container with a resistant inner liner.

Precautionary Statements - Disposal

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

Conditions	Chemical hazard classification	Category
Exposure to Bases and Water	HNOC	Rapid and exothermic reactions.
Exposure to metals may lead to the evolution of hydrogen gas.	Flammable gases	Category 1

Other Information

No information available.

3. Composition/information on ingredients**Substance**

Not applicable.

Mixture**Synonyms**

Oil of vitriol; sulphuric acid

Chemical name	CAS No.	Weight-%
Sulfuric acid	7664-93-9	93.0-95.0
Water	7732-18-5	Balance

Any concentration shown as a range is due to batch variation.

4. First-aid measures**Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. IF exposed or concerned: Get medical advice/attention.

Inhalation

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention.

Skin contact

Get immediate medical attention. Untreated wounds from corrosion of the skin heal slowly and with difficulty. If possible, wipe off areas of contact with dry cloth before flushing with water, as water contact will generate heat. Flush with running water for at least 20 minutes. Immediate medical attention is required. Take off contaminated clothing and wash before reuse.

Ingestion

Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical attention.

Self-protection of the first aider

Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed**Symptoms**

Burning. Redness. May cause blindness. Coughing and/ or wheezing.

Effects of Exposure

May cause cancer.

Indication of any immediate medical attention and special treatment needed**Note to physicians**

Concentrated acid destroys tissue by severe dehydrating action. Dilute solutions act as milder irritants due to acid properties. Sudden circulatory collapse can occur. Sulfuric acid mist may product bronchoconstriction in asthmatics. Concentrated acid is more toxic than pH alone. Treat via dilution - do not attempt neutralization. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

5. Fire-fighting measures**Suitable Extinguishing Media****Small Fire**

Carbon dioxide (CO₂). Dry chemical. Dry sand.

Move containers from fire area if you can do it without risk. Do not get water inside containers.

Large Fire

Flood fire area with large quantities of water, while knocking down vapors with water fog. If insufficient water supply: knock down vapors only. Do not get water inside containers or in contact with substance.

Unsuitable extinguishing media

DO NOT USE WATER ON MATERIAL ITSELF. Reaction with water may generate much heat that will increase the concentration of fumes in the air. Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

May react with metals or heat to release flammable hydrogen gas. The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Non-combustible. May ignite combustibles (wood, paper, oil, clothing, etc.). Reaction with water may generate much heat which will increase the concentration of fumes in the air. Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous combustion products

Oxides of sulfur.

Explosion Data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways.

Methods for cleaning up Dike far ahead of liquid spill for later disposal. Neutralize with soda ash (sodium carbonate) or lime over area of spill. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Contact with water will generate heat. Use non-sparking tools as flammable hydrogen gas may be present in the container and head space. Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. When diluting, always add the product to water. Never add water to the product. Reacts violently with water.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing must not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials. Do not store near combustible materials.

Incompatible materials Chlorates. Cyanide compounds. Sulfides. Bases. Water. Metals. Strong acids. Strong oxidizing agents. Strong reducing agents. Alkali. Organic material. Nitrogen containing compounds.

Packaging materials Not recommended: low density polyethylene; brass, zinc, bronze, copper, aluminum, iron and alloys of these metals.

8. Exposure controls/personal protection

Control Parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other

recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m ³ thoracic particulate matter	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	TWA: 1 mg/m ³ ; IDLH: 15 mg/m ³

Note

See section 16 for terms and abbreviations.

Other information on limit values

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Biological occupational exposure limits

This product, as supplied, contains materials that do not have reportable biological exposure limits or are not subject to the reporting requirements of the local jurisdiction.

Appropriate engineering controls**Engineering controls**

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Face protection shield. Tight sealing safety goggles.

Hand protection

Wear suitable gloves.

Skin and body protection

Wear suitable protective clothing. Chemical resistant apron.

Respiratory protection

Use appropriate respiratory protection.

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance:	Clear
Color:	Colorless to light yellow
Odor (includes odor threshold)	Odorless

Property	Values	Remarks • Method
Melting Point/Freezing Point:	-34 °C / -29.2 °F	
Boiling point (or initial boiling point or boiling range)	276 °C / 528.8 °F	
Flammability (solid, gas)	No data available	
Flammability Limits in Air:		
Upper Flammability Limit:	No data available	
Lower Flammability Limit:	No data available	
Flash Point:	No data available	
Autoignition Temperature:	No data available	
Value	No data available	
SADT (°C)	No data available	
pH	No data available	
pH (as aqueous solution)	No data available	
Kinematic Viscosity:	No data available	
Dynamic Viscosity:	No data available	
Solubility	No data available	
Water solubility	Soluble in water	No data available
Partition coefficient n-octanol/water (log value)	No data available	
Vapor pressure (includes evaporation rate)	0.0016	

Evaporation Rate (BuAc=1):	< 1
Density and/or relative density	1.8354
Bulk Density:	No data available
Liquid Density	No data available
Vapor density (Air =1)	3.4
Particle characteristics	
Particle Size	No data available
Particle Size Distribution	No data available

10. Stability and reactivity

Reactivity	Releases heat and toxic, irritating vapors when mixed with water. Contact with metals may evolve flammable hydrogen gas. Reacts violently with strong alkaline and reducing agents.
Chemical stability	Decomposes on heating.
Possibility of hazardous reactions	Reacts with organic materials and may cause ignition of finely divided materials on contact. Contact with metals may evolve flammable hydrogen gas.
Conditions to Avoid:	Exposure to air or moisture over prolonged periods. Extremes of temperature and direct sunlight.
Incompatible materials	Chlorates. Cyanide compounds. Sulfides. Bases. Water. Metals. Strong acids. Strong oxidizing agents. Strong reducing agents. Alkali. Organic material. Nitrogen containing compounds.
Hazardous decomposition products	Sulfur oxides.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components). Corrosive to the eyes and may cause severe damage including blindness. May cause irreversible damage to eyes.
Skin contact	Dispose of contents/container to an approved waste disposal plant. Specific test data for the substance or mixture is not available. Corrosive. Causes severe burns. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Redness. Burning. May cause blindness. Coughing and/ or wheezing.
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Acute toxicity**Numerical measures of toxicity**

The following ATE values have been calculated for the mixture
ATEmix (oral) 2,252.60 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 0.375 mg/L (Rat) 4 h
Water 7732-18-5	> 90 mL/kg (Rat)	-	-

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

Skin corrosion/irritation Classification based on data available for ingredients. Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye damage. Risk of serious damage to eyes.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2 - Suspected human carcinogen	Group 1 - Carcinogenic to humans	Known human carcinogen	-

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other Adverse Effects: No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sulfuric acid 7664-93-9	-	LC50: >500mg/L (96h, Brachydanio rerio)	-	-

Ceriodaphnia dubia Acute Toxicity Evaluation: 93 - 100% Sulfuric Acid: 48-hour NOEC: 50 ppm, 48-hour LOEC: 100 ppm, 48-hour LC₅₀: 70.71 ppm.

Persistence and Degradability: No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number (product as supplied) D002.

California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information

DOT

UN/ID No	UN1830
Proper shipping name	SULFURIC ACID
Hazard Class	8
Packing Group	II
Description	UN1830, SULFURIC ACID, 8, PG II

15. Regulatory information

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

TSCA Complies

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Sulfuric acid	7664-93-9	Present	Active
Water	7732-18-5	Present	Active

DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

TCSI

Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %
Sulfuric acid - 7664-93-9	1.0

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid - 7664-93-9	1000 lb	-	-	X

CAA (Clean Air Act)

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Extremely Hazardous Substances TPQ
Sulfuric acid - 7664-93-9	1000 lb / 454 kg (final RQ)	1000 lb	1000 lb TPQ

OSHA - Process Safety Management - Highly Hazardous Chemicals

This product does not contain any substances regulated under Process Safety Management (29 CFR 1910.119).

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Sulfuric acid - 7664-93-9	Carcinogen

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable.

16. Other information**NSF/ANSI/CAN 60 Certification**

Maximum Use (mg/L unless otherwise indicated): 50

NFPA Health hazards 3 Flammability 0 Instability 0 Special hazards -

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	American Conference of Governmental Industrial Hygienists
ATE	Acute Toxicity Estimate
Ceiling	Maximum limit value
DOT	Department of Transportation (United States)
EPA	U.S. Environmental Protection Agency
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration to 50% of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program (United States)
OEL	Occupational exposure limits
OSHA	Occupational Safety and Health Administration of the US Department of Labor
PPE	Personal protective equipment
SADT	Self-Accelerating Decomposition Temperature
STEL	Short Term Exposure Limit
TSCA	Toxic Substances Control Act (United States)
TWA	Time-Weighted Average
VOC	Volatile organic compounds

Prepared By: Product Compliance Department
Issuing Date 22-Feb-2013
Revision Date: 11-Jun-2025
Revision Note: Format change.

Disclaimer:

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.

End of Safety Data Sheet