

SAFETY DATA SHEET

Preparation Date: 2/18/2014

Revision Date: 6/20/2018

Revision Number: G4

1. IDENTIFICATION

Product identifier

Product code: S1136
Product Name: SULFURIC ACID, TRACEGRADE

Other means of identification

Synonyms: Oil of Vitriol
 Hydrogen Sulfate
 Dihydrogen Sulfatesulfurique (French)
 Ácido sulfuric (Spanish)

CAS #: 7664-93-9
RTECS # WS5600000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Fertilizer compositons. Echant. Laboratory reagent.
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: lbad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

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

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Inhalation (Gases)	Category 2
Acute toxicity - Inhalation (Vapors)	Category 2
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Label elements

Danger

Hazard statements

Fatal if inhaled
 Causes severe skin burns and eye damage



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

May be harmful if swallowed
Reacts violently with water

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear respiratory protection
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
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 person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
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 %
Sulfuric Acid	7664-93-9	100

4. FIRST AID MEASURES

First aid measures

General Advice:

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect

himself.

Skin Contact: Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician immediately.

Eye Contact: Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. **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. Call a physician immediately.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If victim is conscious, give water or milk. Follow with Milk of Magnesia or egg whites beaten with water. 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

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

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.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: No information available.

Specific hazards: Contact with metals may evolve flammable hydrogen gas. Metal acetylides (Monocesium and Monorubidium), and carbides ignite with concentrated sulfuric acid. White Phosphorous + boiling Sulfuric acid or its vapor ignites on contact. May ignite other combustible materials. May cause fire when sulfuric acid is mixed with Cyclopentadiene, cyclopentanone oxime, nitroaryl amines, hexalithium disilicide, phosphorous (III) oxide, and oxidizing agents such as chlorates, halogens, permanganates. Mixtures of sulfuric acid and any of the following can explode: p-nitrotoluene, pentasilver trihydroxydiaminophosphate, perchlorates, alcohols with strong hydrogen peroxide, ammonium tetraperoxychromate, mercuric nitrite,

potassium chlorate, potassium permanganate with potassium chloride, carbides, nitro compounds, nitrates, carbides, phosphorous, iodides, picratres, fulminates, dienes, alcohols (when heated) Nitramide decomposes explosively on contact with concentrated sulfuric acid. 1,3,5-Trinitrosohexahydro-1,3,5-triazine + sulfuric acid causes explosive decomposition. Containers may explode when heated or if contaminated with water. Reaction with water may generate much heat which will increase the concentration of fumes in the air.

Special Protective Actions for Firefighters

Specific Methods:

Water mist may be used to cool closed containers. Do not use water on material itself. Do not get water inside containers. When material is not involved in a fire, do not use water on material itself. DO NOT use combustible materials such as sawdust.

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

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. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not let product enter drains. Do not flush into surface water or sanitary sewer system. 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 or Sodium bicarbonate. 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:

Use only in area provided with appropriate exhaust ventilation. Do not allow contact with water. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors or spray mist. 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. May corrode metallic surfaces. Do not store in uncoated metallic containers. Store in a segregated and approved area. Do not store near combustible materials. Store away from incompatible materials.

Incompatible Materials:

- Oxidizing agents
- Reducing agents
- Organic materials
- Combustible materials
- Bases
- Amines
- Metals
- Water
- Acids

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Sulfuric Acid	7664-93-9	1 mg/m ³ TWA	1 mg/m ³ TWA	0.2 mg/m ³ TWA thoracic particulate matter	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Sulfuric Acid	7664-93-9	1 mg/m ³ TWA 3 mg/m ³ STEL	0.2 mg/m ³ TWA	0.2 mg/m ³ TWA thoracic	1 mg/m ³ TWAEV 3 mg/m ³ STEV

Australia and Mexico

Components	CAS-No.	Australia	Mexico
Sulfuric Acid	7664-93-9	3 mg/m ³ STEL 1 mg/m ³ TWA	1 mg/m ³ TWA

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. 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: 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

Physical state: Liquid	Appearance: Viscous. Oily.	Color: Colorless.
Odor: Odorless, but has a choking odor when hot.	Taste Strong. Acid.	Formula: H ₂ SO ₄
Molecular/Formula weight (g/mole): 98.08	Flammability: No information available	Flashpoint (°C/°F): No information available.
Flash Point Tested according to: Not available	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): No information available	Decomposition temperature(°C/°F): 340 °C/644 °F
Boiling point/range(°C/°F): 270-337 °C/518/638.6 °F	Bulk density: No information available	Density (g/cm³): No information available
Specific gravity: 1.823-1.84	pH: No information available	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: No information available	Vapor density: 3.4	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 Sulfuric acid is soluble in water with liberation of much heat Soluble in Ethanol	

10. STABILITY AND REACTIVITY

Reactivity

Reacts violently with water

It reacts with alcohols and amines

Incompatible (can react explosively or dangerously) with the following: ACETIC ACID, ACRYLIC ACID, AMMONIUM HYDROXIDE, CRESOL, CUMENE, DICHLOROETHYL ETHER, ETHYLENE CYANOHYDRIN, ETHYLENEIMINE, NITRIC ACID, 2-NITROPROPANE, PROPYLENE OXIDE, SULFOLANE, VINYLIDENE CHLORIDE, DIETHYLENE GLYCOL MONOMETHYL ETHER, ETHYL ACETATE, ETHYLENE CYANOHYDRIN, ETHYLENE GLYCOL MONOETHYL ETHER ACETATE, GLYOXAL, METHYL ETHYL KETONE, dehydrating agents, organic materials, moisture (water), Acetic anhydride, Acetone, cyanohydrin, Acetone+nitric acid, Acetone + potassium dichromate, Acetonitrile, Acrolein, Acrylonitrile, Acrylonitrile+water, Alcohols + hydrogen peroxide, ally compounds such as Allyl alcohol, and Allyl Chloride, 2-Aminoethanol, Ammonium hydroxide, Ammonium triperchromate, Aniline, Bromate + metals, Bromine pentafluoride, n-Butyraldehyde, Carbides, Cesium acetylene carbide, Chlorates, Cyclopentanone oxime, chlorinates, Chlorates + metals, Chlorine trifluoride, Chlorosulfonic acid, 2-cyano-4-nitrobenzenediazonium hydrogen sulfate, Cuprous nitride, p-chloronitrobenzene, 1,5-Dinitronaphthlene + sulfur, Diisobutylene, p-dimethylaminobenzaldehyde, 1,3-Diazidobenzene, Dimethylbenzylcarbinol + hydrogen peroxide, Epichlorohydrin, Ethyl alcohol + hydrogen peroxide, Ethylene diamine, Ethylene glycol and other glycols, , Ethylenimine, Fulminates, hydrogen peroxide, Hydrochloric acid, Hydrofluoric acid, Iodine heptafluoride, Indane + nitric acid, Iron, Isoprene, Lithium silicide, Mercuric nitride, Mesityl oxide, Mercury nitride, Metals (powdered), Nitromethane, Nitric acid + glycerides, p-Nitrotoluene, Pentasilver trihydroxydiaminophosphate, Perchlorates, Perchloric acid, Permanganates + benzene, 1-Phenyl-2-methylpropyl alcohol + hydrogen peroxide, Phosphorus, Phosphorus isocyanate, Picrates, Potassium tert-butoxide, Potassium chlorate, Potassium

Permanganate and other permanganates, halogens, amines, Potassium Permanganate + Potassium chloride, Potassium Permanganate + water, Propiolactone (beta)-, Pyridine, Rubidium acetylethene carbide, Silver permanganate, Sodium, Sodium carbonate, sodium hydroxide, Steel, styrene monomer, toluene + nitric acid, Vinyl acetate, Thallium (I) azidodithiocarbonate, Zinc chlorate, Zinc Iodide, azides, carbonates, cyanides, sulfides, sulfites, alkali hydrides, carboxylic acid anhydrides, nitriles, olefinic organics, aqueous acids, cyclopentadiene, cyano-alcohols, metal acetylides
Evolves flammable hydrogen gas on contact with metals
Concentrated sulfuric acid oxidizes, dehydrates, or sulfonates most organic compounds

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Incompatible materials. Exposure to water.

Incompatible Materials: Oxidizing agents
Reducing agents
Organic materials
Combustible materials
Bases
Amines
Metals
Water
Acids

Hazardous decomposition products: Sulfur oxides.

Other Information

Corrosivity: Extremely corrosive in presence of aluminum
Extremely corrosive in presence of copper
Extremely corrosive in the presence of stainless steel (316)
Highly corrosive in the presence of stainless steel (304)
Minor corrosive effect on bronze
Non-corrosive to lead and mild steel
No corrosion data on brass

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Skin. Inhalation. Ingestion.

Acute Toxicity

Component Information

Sulfuric Acid

CAS-No. 7664-93-9

LD50/oral/rat = 2140 mg/kg Oral LD50 Rat

LD50/oral/mouse = No information available

LD50/dermal/rabbit = No information available

LD50/dermal/rat = No information available

Product code: S1136

Product name: SULFURIC ACID,
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LC50/inhalation/rat = 347 ppm 1 h
420 ppm 1 h
510 mg/m³ Inhalation LC50 Rat 2h
85-103 mg/m³ 1 h
LC50/inhalation/mouse = 320 mg/m³ 2 h
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = 2140 mg/kg

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 = 347 ppm (1-hr)
VALUE-Dust/Mist = 510 mg/m³ (2-hr)

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = 320 mg/m³ 2 h

Symptoms

Skin Contact: Severe skin irritation. Causes skin burns.

Eye Contact: Severe eye irritation. Causes eye burns.

Inhalation Fatal if inhaled. Causes severe irritation of the respiratory tract and mucous membranes with sore throat, coughing, sneezing, shortness of breath, and delayed lung edema. Can cause chemical burns (corrosive action) to the respiratory tract and mucous membranes. Inhalation may be fatal as a result of bronchospasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. May affect cardiovascular system (hypotension, depressed cardiac output, bradycardia). Circulatory shock/collapse with clammy skin, weak and rapid pulse, shallow respiration, and scanty urine may follow. Ischemic liver and heart lesions, kidney failure may occur several hours after unchecked circulatory collapse. Circulatory shock is often the immediate cause of death. May also affect teeth(changes in teeth and supporting structures - erosion, discoloration).

Ingestion May be harmful if swallowed. Causes digestive or gastrointestinal tract burns. Corrosive to the mouth, throat, and stomach. May cause permanent damage to the digestive tract. May cause perforation of the digestive tract. May cause gastritis. May cause abdominal pain. Ingestion may cause nausea, vomiting. Vomit may resemble "coffee grounds". May cause metabolic acidosis.

Aspiration hazard No information available.

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

Chronic Toxicity Inhalation: Prolonged or repeated inhalation may affect behavior (muscle contraction or spasticity), urinary system (kidney damage), and respiratory system/lungs(pulmonary edema, lung damage/changes in lung function with chronic bronchitis and emphysema), teeth (dental discoloration, erosion).Skin: Prolonged or repeated skin contact may cause dermatitis.Eyes: Conjunctivitis is also a common finding with chronic exposure.

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: May cause cancer. However, evidence is inconclusive. Cancer Status: The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mists containing sulfuric acid" as a known human carcinogen, (IARC Group 1). However, this classification applies only to mists containing sulfuric acid generated during an industrial process and not to (almost) pure sulfuric acid or sulfuric acid solutions; The ACGIH has classified "strong inorganic acid mists containing sulfuric acid" as a suspected human carcinogen (ACGIH Group A2). However, this classification applies only to mists containing sulfuric acid generated during an industrial process and not to (almost) pure sulfuric acid or sulfuric acid solutions.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Sulfuric Acid	7664-93-9	Group 1 - Monograph 54 [1992] occupational exposure to mists and vapours from sulfuric acid and other strong inorganic acids	A2 Suspected Human Carcinogen (contained in strong inorganic acid mists)	Not listed	Present	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: Developmental effects and Teratogenicity: According the the Registry of Toxic Effects of Chemical Substances (RTECS reference - Murry et al, "Embryotoxicity of Inhaled Sulfuric Acid Aerosol in Mice and Rabbits", Journal of Environmental Science and Health, Part C, Vol. 13, pages 251-266, 1979), musculoskeletal developmental abnormalities were found in rabbits at a dose of 20 mg/m³ for 7 hrs. However, REPROTOX and Shepard's Catalog of Teratogenic Agents, citing this same study, stated that inhalation of sulfuric acid fumes did not increase congenital anomalies in the offspring of treated pregnant mice or rabbits. Furthermore, the Hazard Substance Data Bank (HSDB) also stated that in a

developmental toxicity study conducted under a method similar to OECD test Guideline 414 that no significant effects on mean numbers of implants/dam, live fetuses/litter or resorptions/litter were observed in mice and rabbits exposed by inhalation to sulfuric acid aerosol at 5 and 20 mg/m³ during gestation and therefore could not be considered embryotoxic, or fetotoxic.

Specific Target Organ Toxicity

STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organs: Skin. Eyes. Respiratory system. Teeth.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Sulfuric Acid - 7664-93-9

Freshwater Fish Species Data: 500 mg/L LC50 Brachydanio rerio 96 h static 1
Water Flea Data: 29 mg/L EC50 Daphnia magna 24 h

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	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Sulfuric Acid	7664-93-9	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN1830
Proper Shipping Name: Sulfuric acid
Hazard Class: 8
Subsidiary Class No information available
Packing group: II
Emergency Response Guide Number 137
Marine Pollutant Severe Marine Pollutant
DOT RQ (lbs): No information available
Special Provisions A3, A7, B3, B83, B84, IB2, N34, T8, TP2
Symbol(s): [DOT]: (R4) - Identifies a material that is a hazardous substance that has a

Description: reportable quantity (RQ) of 1000 pounds (454 Kilograms).
UN1830, Sulfuric acid, 8, II

TDG (Canada)
UN-No: UN1830
Proper Shipping Name: Sulfuric acid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Marine Pollutant Description: No Information available
UN1830, Sulfuric acid, 8, II

ADR
UN-No: UN1830
Proper Shipping Name: Sulphuric acid
Hazard Class: 8
Packing Group: II
Subsidiary Risk: No information available
Description: UN1830, Sulphuric acid, 8, II

IMO / IMDG
UN-No: UN1830
Proper Shipping Name: Sulfuric acid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Marine Pollutant Description: No information available
EMS: F-A
Description: UN1830, Sulphuric acid, 8, II

RID
UN-No: UN1830
Proper Shipping Name: Sulphuric acid
Hazard Class: 8
Subsidiary Risk: 8
Packing Group: II
Description: UN1830, Sulphuric acid, 8, II

ICAO
UN-No: UN1830
Proper Shipping Name: Sulphuric acid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
Description: UN1830, Sulphuric acid, 8, II

IATA
UN-No: UN1830
Proper Shipping Name: Sulphuric acid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: II
ERG Code: 8L
Special Provisions Description: No information available
UN1830, Sulphuric acid, 8, II

15. REGULATORY INFORMATION

International Inventories

Product code: S1136

Product name: SULFURIC ACID,
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Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Sulfuric Acid	7664-93-9	PresentACTIVE	Present KE-32570	Present	Present (1)-430	Present	Present	Present 231-639-5

U.S. Regulations

Sulfuric Acid

Massachusetts RTK: Present

New Jersey RTK Hazardous Substance List: 1761

New Jersey (EHS) List: 1761 500 lb TPQ

New Jersey - Discharge Prevention - List of Hazardous Substances: Present

Pennsylvania RTK: Environmental hazard

Pennsylvania RTK - Environmental Hazard List Present

Minnesota - Hazardous Substance List: Present

New York Release Reporting - List of Hazardous Substances:

1000 lb RQ

100 lb RQ

Louisiana Reportable Quantity List for Pollutants: 1000lbfinal RQ

454kgfinal RQ

California Directors List of Hazardous Substances: Present

FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1095

FDA - 21 CFR - Total Food Additives 172.560, 172.892, 173.385, 176.170, 176.180, 176.210, 177.2800, 178.1010, 179.45, 184.1095, 73.85

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

Chemicals Known to the State of California to Cause Cancer:

WARNING: This product contains a chemical known to the State of California to cause cancer. (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	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Sulfuric Acid	7664-93-9	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	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 de minimis
Sulfuric Acid	7664-93-9	1000 lb final RQ 454 kg final RQ	1000 lb TPQ 1000 lb EPCRA RQ	None	None	1.0 % de minimis concentration

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Sulfuric Acid	7664-93-9	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Product code: S1136

Product name: SULFURIC ACID,
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Component
Sulfuric Acid
7664-93-9 (100)

WHMIS 2015 Hazard Classification
Corrosive to Metals - Category 1: H290 May be corrosive to metals. (85% (30.8); potentially corrosive to metals; the supplier should be contacted for more information); Acute toxicity - Inhalation - Category 2: H330 Fatal if inhaled. (85% (30.8)); Acute toxicity - Inhalation - Category 3: H331 Toxic if inhaled. (50% (14.2N)); Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract (2% (0.4N)); Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage. (50% (14.2N)); Skin corrosion/irritation - Category 1A: H314 Causes severe skin burns and eye damage. (2% (0.4N)); Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage. (2% (0.4N))

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class

D1A Very toxic materials
E Corrosive material

Components

Sulfuric Acid

WHMIS 1988

D1A E including >51%

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 -
Sulfuric Acid	1 %

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Sulfuric Acid	7664-93-9	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Sulfuric Acid	7664-93-9	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Sulfuric Acid	7664-93-9	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Sulfuric Acid	7664-93-9	Skin corrosion/irritation - Skin Corr. 1A: H314 Causes severe skin burns and eye damage. (C >= 15 %) 016-020-00-8 Skin corrosion/irritation - Skin Corr. 1A: H314 Causes severe skin burns and eye damage. (C >= 15 %); Skin corrosion/irritation - Skin Irrit. 2: H315 Causes skin irritation. (5 % <= C <15 %); Serious Eye Damage/Eye Irritation - Eye Irrit. 2: H319 Causes serious eye irritation. (5 % <= C <15 %) 016-020-00-8

EU - CLP (1272/2008)

R-phrases(s)

R35 - Causes severe burns.

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S -phrase(s)

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

S30 - Never add water to this product.

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

S 1/2 - Keep locked up and out of the reach of children.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Sulfuric Acid	7664-93-9	C; R35	15%<=C C; R35 5%<=C<15% Xi; R36/38	S: (1/2)-26-30-45

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

Indication of danger:

C - Corrosive.

**16. OTHER INFORMATION**

Preparation Date: 2/18/2014
Revision Date: 6/20/2018
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