

Material Safety Data Sheet

Sulphuric acid

Section 1: Product and Manufacturer Identification Details

This section helps in knowing the product and the manufacturer through some useful details. The following details must be present, therefore.

- **Chemical Name:** Sulphuric acid
- **Formula:** H₂-SO₄
- **CAS Number:** 7664-93-9
- **Synonym:** Oil of Vitriol; Sulphuric Acid
- **Chemical Name:** Hydrogen sulfate
- **Manufacturer's name:** Barentz, CJ Chemicals, E&C Chemicals Inc.(Leading Sulphuric Acid manufacturers in US)
- **Address:**

Barentz address: 1390 Jaycox Road, Avon, Ohio 44011, United States of America.

CJ Chemicals address: 719 Brown Ave. Toledo OH 43607.

E&C Chemicals: 211 Ave C, Carrollton, GA 30117, USA

- **Contact no:** Barentz: +1 877 627 6661, CJ Chemicals: +1 888-274-1044, E&C Chemicals: +1 800-241-4051

Section 2: Ingredients in Detail

The key composition of the Sulphuric acid has to be present in this section. So, check out the below structure.

- **Composition:** Methyl alcohol
- **% by Weight:** 95 - 98
- **Toxicological data on Ingredients:** Sulphuric acid: ORAL (LD50) Acute: 2140 mg/kg, VAPOR (LC50): Acute: 510 mg/m, VAPOR (LC50): Acute: 510 mg/m 2 hours

Section 3: Hazard Statement of Sulphuric Acid

The details of the hazards should be present here in this section in the following format.

- **Possible Impacts on Health:** May irritate in case of skin contact. Similarly, eye contact or inhalation could also be very hazardous. Due to liquid or spray mist tissue damage may be observed.
- **Possible Chronic Health Effect:** It may be toxic to kidneys, lungs, heart, cardiovascular system, upper respiratory tract, eyes, and teeth. Repeated or prolonged exposure may damage various organs.

Section 4: Hazard Statement of Sulphuric Acid

Users should be able to find the first aid tips by going through this section.

- **Eye and Skin:** Give first aid advice on how to shield the skin and eyes. For example, applying water to the eyes or skin for fifteen minutes can help.
- **Inhalation and Ingestion:** Talk about the first aid guidelines for ingesting and inhaling substances. For example, the affected person can benefit instantly from fresh air. Medical help is ultimately required in such cases.

Section 5: Fire Fighting Tips

Some of the crucial firefighting information must be present here. Therefore, follow the structure below to convey the details.

- **Flammability:** Non-flammable.
- **Flash Points:** NA
- **Flammable Limits:** NA
- **Fire Hazards:** When sulfuric acid is combined with hexa lithium disilicate, cyclopentanone oxime, nitroaryl amines, and cyclopentadiene, it may result in fire.
- **Explosion Hazards:** Share details on any explosion hazards associated with this substance.

Section 6: Accidental Release Tips

Users should be able to find tips on what to do in incidents like small spills or large spills. For example, in case of small spills dilute with water and mop up. In case of a large spill, one needs to use dry earth, sand, or other non-combustible material. To divert vapor drift also water spray can help.

Section 7: Storage and Handling Tips

Users should be able to find important tips on how to handle such types of toxic substances.

- **Safe Handling Tips:** A locked up and dry container is necessary to handle such types of toxic substances. Moreover adding water can be dangerous. In the case of insufficient ventilation, one must wear suitable respiratory equipment.
- **Storage Methods:** The container must be tightly closed and kept in a cool, well-ventilated area. Do not store above 23°C (73.4°F).

Section 8: Exposure Control Tips

The following format is necessary to convey the exposure control tips.

- **Details of Engineering Control:** Providing exhaust ventilation or other engineering controls is necessary for workers to keep the airborne concentrations of vapors below their respective threshold limit value. Moreover, eyewash stations and safety showers are also necessary.
- **Tips for Personal Protection:** Face shield, full suit, vapor respirator, and using an approved or certified respirator or equivalent is important. In case of large spills gloves and boots will be helpful.
- **Exposure Limits:** TWA: 1 (mg/m³)

Section 9: Sulphuric Acid Chemical Properties

Important information about this substance's chemical and physical characteristics should be included in this section. Adhere to the outline provided below.

- **Physical state and appearance:** Liquid.
- **Odor:** Odorless, but has a choking odor when hot
- **Taste:** Marked acid taste. (Strong.)
- **Molecular Weight:** 98.08 g/mole
- **Color:** Colorless.
- **pH (1% soln/water):** Acidic.
- **Boiling Point:** 270°C (518°F)
- **Melting Point:** -35°C (-31°F) to 10.36 Degree C
- **Specific Gravity:** 1.84
- **Vapor Density:** 3.4
- **Solubility:** It's easily soluble in cold water.

Section 10: Sulphuric Acid Chemical Properties

Users must find details like on Sulphuric acid's reactivity and stability in this section. So, the following structure should be followed.

- **Stability:** Sulphuric acid is stable.
- **Incompatible Materials:** Excess heat, combustible material materials, organic materials, and exposure to moist air or water.
- **Corrosivity:** It's extremely corrosive in the presence of aluminum, copper, and stainless steel.
- **Reactivity Information:** It reacts violently with water and alcohol.

Section 11: Key Toxicological Information

Users must be able to find information on the effects of toxic inhalation. Follow the structure mentioned below to convey the details.

- **Entry Routes:** It's absorbed through skin, dermal contact, eye contact, inhalation, and ingestion.
- **Toxicity to Animals:** Acute oral toxicity (LD50): 2140 mg/kg on rats
- **Adverse Chronic Effects on Humans:** May damage kidneys, lungs, heart, cardiovascular system, and upper respiratory tract.

Section 12: Ecological Information and Details

This section informs users how harmful Sulphuric acid is to the environment.

- **Ecotoxicity:** Ecotoxicity in water (LC50): 49 mg/l 48 hours
- **Products of Biodegradation:** Long-term degradation products may arise due to this substance.
- **Toxicity details of Products of Biodegradation:** Degradation products are not as harmful as the original substance.

Section 13: Disposal Guidelines

Details on the disposal guideline of sulphuric acid must be present here. For instance, it should be placed in a sealed container or absorbed in vermiculite, dry sand, earth, or a similar material.

It may also be diluted and neutralized. Moreover, consultation with local or regional authorities is necessary.

Section 14: Transport Guidelines

Provide the transport guideline of Sulphuric Acid for proper shipping processes.

- **DOT Classification:** Class 8: Corrosive material
- **Identification:** Sulfuric acid UNNA: 1830 PG: II

Section 15: Details on Regulatory Information

Here users should be able to find some regulatory information and must get all the regulatory requirements to handle or store Sulphuric Acid.

Section 16: Details on Regulatory Information

The manufacturer's information should be included in this area along with the revision or preparation date.
