Material Safety Data Sheet

Sulfuric Acid 98% (RXSOL-19-1104-060)

1. Product and Company Identifaction

Product Name	Sulfuric Acid 98%
Part Number	RXSOL-19-1104-060

Company Details:
RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

Branch : Kandla, Mumbai, Chennai, Vizag, Kolkata, UAE, Oman

Phone	+91 22 27815540 / 41 / 42
Fax	+91 22 2781 1318 :::AOH :0091 9821214367
Email	123@rxmarine.com
Website	www.rxmarine.com

2. Composition / informationon ingredients

Name of Substance	Cas Number	EC Number
Sulfuric Acid	7664-93-9	231-693-5

3. Hazards Identification

Hazard Pictogram	
Signal Word	Danger
Hazard Statements	Causes severe skin burns and eye damage May cause respiratory irritation Fatal if inhaled May cause cancer
Prevention	Obtain special instructions before use Do not handle until all safety precautions have been read and understood Use personal protective equipment as required 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
Response	Immediately call a POISON CENTER or doctor/physician.
Hazards not otherwise classified (HNOC)	Reacts violently with water.

4. First Aid Measures

Eye Contact	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. 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. Immediate medical attention is required.
Ingestion	Do not induce vomiting. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed	Causes burns by all exposure routes. . Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.
Notes to Physician	Treat symptomatically

5. Fire-fighting Measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	For this substance/mixture no limitations of extinguishing agents are given. DO NOT USE WATER
Flash Point	No information available
Specific Hazards Arising from the Chemical	Not combustible. Ambient fire may liberate hazardous vapours. Fire may cause evolution of: Sulphur oxides
Advice for firefighters	Special protective equipment for firefighters Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Further information	Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8.
Environmental precautions	Should not be released into the environment. Prevent product from entering drains. Keep out of waterways. See Section 12 for additional ecological information.
Methods and materials for containment and cleaning up	Use personal protective equipment. Provide adequate ventilation. Neutralize with lime milk or soda and flush with plenty of water. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Keep from any possible contact with water, because of violent reaction and possible flash fire. Do not flush into surface water or sanitary sewer system.

7. Handling and Storage

Handling	Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist. Do not ingest. Do not allow contact with water because of violent reaction. Handle under inert gas, protect from moisture.
Storage	Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Non-combustible, corrosive hazardous materials

8. Exposure controls and personal protection

Engineering Measures	Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

	Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.
Personal Protective Equipment	Eye/face protection : Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Skin protection : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body Protection	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory Protection	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.



Gloves



Suit

9. Physical and chemical properties

Physical State	Liquid
Colour	Colourless
Odour	Odourless
Odor Threshold	Not Applicable
pH	0.3 at 49 g/l 25 °C
Melting Point	-20 °C
Initial boiling point / Range	335 °C at 1,013 hPa
Flash point	No information available
Evapouration rate	No information available
Flammability (solid, gas)	No information available
Upper/lower explosive limits	No data available
Vapour pressure	ca.0.0001 hPa at 20 °C
Vapour density	3.4 (Air = 1.0)
Specific Gravity	1.84 g/cm3 at 20 °C
Relative Density	No Information Available
Water Solubility	Soluble, (caution ! development of heat)
Partition coefficient	n-octanol/water No data available
Auto-ignition	No information available
Decomposition	No information available
Viscosity,Dynamic	ca.24 mPa.s at 20 °C
Molecular Formula	Formula H?SO?
Molecular Weight	98,08 g/mol

10. Stability and reactivity

Reactive Hazard	Yes strong oxidising agent
Stability	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	A risk of explosion and/or of toxic gas formation exists with the following substances: Violent reactions possible with: Water, Alkali metals, alkali compounds, Ammonia, Aldehydes, acetonitrile, Alkaline earth metals, alkalines, Acids, alkaline earth compounds, Metals, metal alloys, Oxides of phosphorus, phosphorus, hydrides, halogen-halogen compounds, oxyhalogenic compounds, permanganates, nitrates, carbides, combustible substances, organic solvent, acetylidene, Nitriles, organic nitro compounds, anilines, Peroxides, picrates, nitrides, lithium silicide, iron(III) compounds, bromates, chlorates, Amines, perchlorates, hydrogen peroxide
Incompatible Materials	Bases, Strong oxidizing agents, Ammonia, Combustible material, Metals, Reducing agents
Conditions to avoid	No information available

11. Toxicological information

Toxicologically	No information available
Irritation	Causes burns by all exposure routes
Sensitization	No information available
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen. Exposure to strong inorganic mists containing sulfuric acid may cause cancer by inhalation.
Mutagenic Effects	No information available
Reproductive Effects	No information available
Developmental Effects	No information available
Teratogenicity	No information available
STOT - single exposure	Respiratory system
STOT - repeated exposure	None known
Aspiration hazard	No information available
Symptoms / effects,both acute and delayed	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.
Endocrine Disruptor Information	No information available
Other AdverseEffects	See actual entry in RTECS for complete information.
Further information	After inhalation of aerosols: damage to the affected mucous membranes. After skin contact: severe burns with formation of scabs. After eye contact: burns, corneal lesions. After swallowing: severe pain (risk of perforation!), nausea, vomiting and diarrhoea. After a latency period of several weeks possibly pyloric stenosis. Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

12. Ecological information

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Toxicity	No information available.
Bioaccumulation/ Accumulation	No information available.
Persistence and degradability	No information available
Mobility in Soil	No information available
Results of PBT and vPvB assessment	No information available
Other adverse effects Additional ecological information	Biological effects: Forms corrosive mixtures with water even if diluted. Harmful effect due to pH shift. Endangers drinking-water supplies if allowed to enter soil or water. Discharge into the environment must be avoided.

13. Disposal considerations

Waste treatment methods	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT / ADR

UN Number	UN 1830
Proper shipping name	SULFURIC ACID,
Class	8
Packing Group	II
Environmentally hazardous	---
Special precautions for user	yes

TDG / IMDG / IMO

UN Number	UN 1830
Proper shipping name	SULFURIC ACID,
Class	8
Packing Group	II
Environmentally hazardous	---
Special precautions for user	yes
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not relevant

IATA

UN Number	UN 1830
Proper shipping name	SULFURIC ACID,
Class	8
Packing Group	II
Environmentally hazardous	---
Special precautions for user	yes

15. Regulatory information

TSCA 12(b)Notices of Export	This safety datasheet complies with the requirements of Regulation (EC) No. 190 7/2006.
SARA 313	Not applicable
SARA 311/312	Hazard Categories See section 3 for more information
CWA (Clean Water Act)	Not applicable
Clean Air Act	Not applicable
OSHA	Occupational Safety and Health Administration
Chemical Safety Assesment	For this product a chemical safety assessment was not carried out

16. Other information

Other Information	The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages. DISCLAIMER OF LIABILITY :The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.