

FICHA COM DADOS DE SEGURANÇA

Nome do Produto: ACIDO SULFURICO

Revisão: 1 (Ing)

Data: 08/10/2025

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1 - Identificação

Nome do Produto: ACIDO SULFURICO

Número da FDS: 557

Comercializado por: Morais de Castro Comércio e Importação de Produtos Químicos Ltda.

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1.1-Outras maneiras de identificação:

Hydrogen Sulphate, Vitrial Oil, Fertilizer Acid, Battery Acid

1.2-Usos recomendados do produto químico e restrições de uso:

Recommended main uses for the substance: Industrial

2 - Identificação de perigos

Classification of the substance or mixture:

Acute Toxicity (Oral), Category 5.

Skin Corrosion/Irritation, Category 1A.

Serious Eye Damage/Irritation, Category 1.

Acute Aquatic Hazard, Category 3.

GHS labeling elements, including precautionary statements:

Pictogramas:



Word of warning:

Danger.

Hazard Statements:

H303 - May be harmful if swallowed.

H314 - Causes severe skin burns and serious eye damage.

H318 - Causes serious eye damage.

H402 - Harmful to aquatic life.

Precautionary Statements:

Prevention:

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

P264 - Wash hands, forearms, and face thoroughly after handling.

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Emergency Response:

P301 + P312 - IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. If wearing contact lenses, remove them if

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easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTER/doctor.

P321 - Specific treatment (see supplemental first aid instructions on this label).

Storage:

P405 - Store locked up.

Final disposal:

P501 - Dispose of contents/container at a special or hazardous waste collection point in accordance with local, regional, national, and/or international regulations.

Other hazards that do not result in a classification:

Not available.

3 - Composição e Informações sobre os ingredientes

Substances

Chemical identity: Sulfuric acid 98%.

Common name, synonym: Hydrogen sulfate, Vitriol oil, Fertilizer acid, Battery acid.

CAS Registry Number: 7664-93-9.

Impurities contributing to the hazard: Not available.

4 - Medidas de primeiros-socorros

Description of necessary first aid measures:

Seek medical attention immediately.

Inhalation:

If breathing is difficult, remove the victim to fresh air and keep them at rest in a position comfortable for breathing. Remove the person to fresh air and keep them at rest in a position comfortable for breathing. If you feel unwell, contact a POISON CENTER/doctor. Immediately contact a POISON CENTER or doctor.

Skin contact:

After skin contact, immediately remove all contaminated clothing and wash with plenty of water. If clothing sticks to the skin, do not remove it. Be careful, the product can remain trapped under clothing, shoes, or a wristwatch.

Eye contact:

IF IN EYES: Rinse cautiously with water for several minutes. If wearing contact lenses, remove them if easy to do. Continue rinsing.

Ingestion:

If you feel unwell, consult a doctor. If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting due to corrosive effects.

Most important symptoms and effects, acute or delayed:

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Symptoms/Effects:

Causes severe skin burns and eye damage. Harmful in contact with skin. May be harmful in contact with skin. Causes serious eye damage.

Symptoms/Effects after inhalation:

May cause respiratory tract irritation, sneezing, coughing, a burning sensation in the throat with a feeling of laryngeal constriction, and difficulty breathing. May cause headache, nausea, and respiratory tract irritation.

Symptoms/Effects after skin contact:

Highly corrosive to the skin. Causes severe burns, irritation (itching, redness, blistering).

Symptoms/Effects after Eye Contact:

Causes severe eye burns. Burning, redness, itching, and tearing. May cause eye irritation. Risk of serious eye damage. Causes serious eye damage.

Symptoms/Effects after Ingestion:

May be harmful if swallowed. Ingestion may cause nausea and vomiting. Burns of the gastric/intestinal mucosa. May cause irritation of the digestive tract. Burns or irritation of the tissues of the mouth, throat, and gastrointestinal tract.

Indication of immediate medical attention and special treatment required, if necessary:

Treat symptomatically.

5 - Medidas de combate a incêndio

Extinguishing Media:

Suitable Extinguishing Media:

Water spray, dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).

Unsuitable Extinguishing Media:

Do not use a strong water jet.

Specific Hazards from the Substance or Mixture:

Fire Hazard:

In case of fire, corrosive gases are released. In case of fire and/or explosion, do not breathe fumes.

Explosion Hazard:

No direct explosion hazard.

Special Protective Measures for Firefighters:

Firefighting Instructions:

Fight the fire using normal precautions, from a reasonable distance. Do not enter the fire area without appropriate protective equipment, including respiratory protection.

Protection During Firefighting:

Wear self-contained breathing apparatus with positive pressure and chemical protective clothing.

6 - Medidas de controle para derramamento ou vazamento

Personal precautions, protective equipment, and emergency procedures:

For non-emergency personnel:

Wear recommended personal protective equipment. Leave the area. Only qualified personnel equipped with appropriate protective equipment may intervene. Notify the fire department and environmental authorities.

For emergency personnel:

Self-containing breathing apparatus. Impervious full-body protective clothing, gloves, and boots should be worn to avoid contact with the product. Corrosion-resistant clothing. Equip cleanup personnel with appropriate protection. Avoid contact with skin and eyes. May be harmful to aquatic organisms, flora, and soil organisms. Clean up any spill as quickly as possible, using absorbent material to collect it. Contain the spill if safely possible. Notify authorities if the product enters sewers or public waterways. Absorb the spilled product to prevent property damage.

Environmental precautions:

Do not allow to enter storm drains or waterways. Harmful to aquatic organisms. Do not allow the product to spread into the environment. Avoid release into the environment. Notify authorities if the product enters sewers or public waterways.

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Methods and materials for containment and cleanup:

For containment:

Absorb spilled material with sand or earth. Contain any spill with barriers or absorbent materials to prevent migration and entry into sewers or streams. Stop the leak if possible without risk.

Cleanup methods:

Absorb the spilled product to prevent material damage. Clean up immediately by sweeping or vacuuming. Clean contaminated surfaces with plenty of water. Absorb the spilled liquid with absorbent material.

7 - Manuseio e armazenamento

Precautions for safe handling

When heated, the material emits highly irritating vapors that can be harmful to the eyes. Ensure good ventilation in the workplace. Use personal protective equipment. Store only in the original container. Do not handle the product until you have read and understood all safety precautions.

Hygiene measures:

Always wash your hands after handling the product. Remove contaminated clothing. Do not eat, drink, or smoke while using this product.

Conditions for safe storage, including any incompatibilities:

Store locked. Store in hermetically sealed, leak-proof containers. Keep in a cool place. Keep away from sunlight. Store in a well-ventilated place. Keep in a cool place.

Packaging materials:

Always store the product in a container made of the same material as the original container.

8 - Controle de exposição e proteção individual

Control Parameters:

Sulfuric Acid (7664-93-9).

USA - ACGIH - Occupational Exposure Limits.

Local name: Sulfuric acid.

ACGIH TWA (Time-Weighted Average) (mg/m³): 0.2 mg/m³ (Thoracic fraction).

Observation (ACGIH): TLV® Basis: Pulm func. Notations: A2 (Suspected Human Carcinogen. Classification refers to sulfuric acid contained in strong inorganic acid mists).

Regulatory Reference: ACGIH 2018 USA - OSHA - Occupational Exposure Limits.

Local name: Sulfuric acid.

OSHA PEL (TWA) (mg/m³): 1 mg/m³.

Regulatory Reference (US-OSHA): OSHA Annotated Table Z-1.

Engineering Controls:

Eyewash fountains and emergency safety showers should be available in the immediate vicinity of any potential exposure.

Personal Protective Measures:

Hand Protection:

PVC protective gloves. Nitrile rubber gloves. Cold-resistant gloves.

Eye Protection:

Wear airtight safety glasses.

Skin and Body Protection:

Corrosion-resistant clothing. Wear impervious rubber safety shoes. Chemical-resistant safety shoes.

Respiratory Protection:

Respiratory protective equipment is recommended where inhalation may occur during use.

Heat Hazards:

Not available.

9 - Propriedades físicas e químicas

Physical state: Liquid.

Color: Colorless to yellow-brown.

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Odor: Irritating/pungent odor.

Melting point/freezing point: 10 °C.

Boiling point or initial boiling point and boiling range: 290 °C.

Flammability (solid/gas): Not available.

Lower explosive/flammability limit: Not available.

Upper explosive/flammability limit: Not available.

Flash point: Not available.

Autoignition temperature: Not available.

Decomposition temperature: Not available.

pH: < 2.

Kinematic viscosity: Not available.

Solubility: Soluble in water.

n-octanol/water partition coefficient (Log Kow): Not available.

Vapor pressure: < 0.001 mm Hg.

Density and/or relative density: 1.82 g/cm³.

Relative vapor density: Not available.

Particle characteristics: Not available.

10 - Estabilidade e reatividade

Reactivity:

The product is non-reactive under normal conditions of use, storage, and transportation.

Chemical stability:

Stable under normal conditions of use.

Possibility of hazardous reactions:

None under normal conditions of use.

Conditions to avoid:

Extremely high or low temperatures. Keep away from heat, sparks, open flames, and hot surfaces. Do not smoke.

Incompatible materials:

Oxidizing agents, reducing agents, water, bases, combustible materials, metals, and organic substances.

Hazardous decomposition products:

May decompose when exposed to high temperatures, releasing corrosive gases.

11 - Informações toxicológicas

Acute toxicity:

Sulfuric acid (7664-93-9).

Oral LD50, rat - 2140 mg/kg body weight (Rat, Experimental value).

Skin corrosion/irritation:

Causes severe skin burns. pH: < 2.

Serious eye damage/eye irritation:

Causes serious eye damage. pH: < 2.

Respiratory or skin sensitization:

Not available.

Germ cell mutagenicity:

Not available.

Carcinogenicity:

Not available.

Reproductive toxicity:

Not available.

STOT - Single exposure:

Not available.

STOT - Repeated exposure:

Not available.

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Aspiration hazard:

Not available.

12 - Informações ecológicas

Ecotoxicity:

Hazardous to the aquatic environment, acute: Harmful to aquatic organisms.

Hazardous to the aquatic environment, chronic: Not available.

Sulfuric acid (7664-93-9).

LC50 fish 1 - 42 mg/L (96 h, Gambusia affinis).

EC50 Daphnia 1 - 29 mg/L (24 h, Daphnia magna).

Persistence and degradability:

Sulfuric acid (7664-93-9).

Persistence and degradability - Biodegradability: Not applicable.

Biochemical oxygen demand (BOD): Not applicable.

Chemical oxygen demand (COD): Not applicable.

DTO: Not applicable.

BOD (% DTO): Not applicable.

Bioaccumulative potential:

Ecotoxicity.

n-octanol/water partition coefficient (Log Pow): -2.2 (Estimated value).

Bioaccumulative potential: Not bioaccumulative.

Mobility in soil:

No additional information available.

Other adverse effects:

May cause pH changes in aqueous ecological systems. Before neutralization, the product may be harmful to aquatic organisms.

13 - Considerações sobre destinação final

Recommended methods for final disposal:

Must undergo special treatment in accordance with local regulations.

Product/packaging disposal recommendations:

Disposal must be carried out in accordance with official regulations.

Additional information:

Do not reuse empty containers.

14 - Informações sobre transporte

National and international regulations:

Land Transportation: ANTT

ANTT - National Land Transportation Agency: Resolution No. 5998 of November 3, 2022: Approves the Supplementary Instructions for the Land Regulations for the Transportation of Dangerous Goods, and establishes other provisions.

UN No. (RES 5232): 1830.

Proper Shipping Name (RES 5232): SULFURIC ACID.

Class (RES 5232): 8.

Hazard Number (Res 5232): 80.

Packing Group (Res 5232): II.

Hazardous to the environment: No.

Sea Transportation: IMDG

International Maritime Dangerous Goods.

UN No. (IMDG): 1830.

Proper Shipping Name (IMDG): SULPHURIC ACID.

Class (IMDG): 8.

Packing Group (IMDG): II.

EMS-No. (Fire): F-A.

EMS-No. (Spill): S-B.

Dangerous for the environment: No.

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Air transport: IATA

International Air Transport Association.

UN No. (IATA): 1830.

Proper Shipping Name (IATA): Sulphuric acid.

Class (IATA): 8.

Packing Group (IATA): II.

Dangerous for the environment: No.

15 - Informações sobre regulamentações

Specific safety, health, and environmental regulations for the chemical product:

NBR 14725/2023 - Chemical products — Safety, health, and environmental information — General aspects of the Globally Harmonized System (GHS), classification, SDS, and labeling of chemical products.

Resolution No. 5998/ANTT of November 3, 2022 - Updates the Regulation for the Road Transportation of Dangerous Goods.
Ordinance No. 240 of March 12, 2019: Product subject to control and inspection by the Ministry of Justice - Federal Police Department - MJ/DPF.

16 - Outras Informações

Important information not specifically described in the previous sections:

This information is based on our current knowledge and is intended to describe the product solely with regard to health, safety, and environmental requirements. It should not, therefore, be construed as a guarantee of any specific product properties.

References:

Not available.

Legends and abbreviations:

Not available.