

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier:

Product name:

SULPHURIC ACID 51 - 99%

Synonyms; trade names:

DIPPING ACID, HYDROGEN SULPHATE, NORDHAUSEN ACID, OIL OF VITRIOL, SPIRIT OF SULPHUR, VITRIOL BROWN OIL, SULPHURIC ACID 96% ACIPRO PLUS, SULPHURIC ACID PURISS, SULPHURIC ACID CHEM. PURE 96%, SULPHURIC ACID 98 - 99%, SULPHURIC ACID 98-99% Q.P, SULPHURIC ACID 78% SOL, SULPHURIC ACID 96% SOL, SULPHURIC ACID CP 96% SOL, SULPHURIC ACID 63.5%, SULPHURIC ACID 97%, SULPHURIC ACID 70%, SULPHURIC ACID 69% SOL, SULPHURIC ACID 90%, SULPHURIC ACID 96%, SULPHURIC ACID 96% UNI 899:2009, SULPHURIC ACID HG 96% SOL, SULPHURIC ACID CP 96% SOL PVS, SULPHURIC ACID 98% BP, SULPHURIC ACID 98% AR, SULPHURIC ACID MAX. 97%, SULPHURIC ACID 96% CZ, SULPHURIC ACID 65%, SULFURIC ACID 94%, SULPHURIC ACID 93%, SULPHURIC ACID 96% UM, SULPHURIC ACID 96% SOL, HYDREX 9536, SULPHURIC ACID 96% AR, SULPHURIC ACID 96% SOL SWDE, SULPHURIC ACID 98.8%, SULPHURIC ACID 96.5%, SULPHURIC ACID 60%, SULPHURIC ACID 70% SOL PVS, SULPHURIC ACID 77%, SULPHURIC ACID 55%, SULPHURIC ACID 78% SOL PVS, SULPHURIC ACID 79% SOL

REACH registration number:

01-2119458838-20-XXXX

CAS number:

7664-93-9

EU index number:

016-020-00-8

EC number:

231-639-5

Relevant identified uses of the substance or mixture and uses advised against

Identified uses:

Industrial application. Chemical Intermediate. Lab Reagent.

Company name:

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Classification (EC 1272/2008):

Physical hazards:

Not Classified.

Health hazards:

Skin Corr. 1A - H314. Eye Dam. 1 - H318.

Environmental hazards:

Not Classified.

[cont...]

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Label elements:

EC number: 231-639-5

Hazard pictograms:



Signal word: Danger.

Hazard statements: H314 Causes severe skin burns and eye damage.

Precautionary statements: P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/ container in accordance with national regulations.

Supplemental label information: Acquisition, possession or use by the general public is restricted.

Other hazards: This substance is not classified as PBT or vPvB according to current EU criteria.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

Product name: SULPHURIC ACID 51 - 99%

REACH registration number: 01-2119458838-20-XXXX

EU index number: 016-020-00-8

CAS number: 7664-93-9

EC number: 231-639-5

Composition comments: The data shown are in accordance with the latest EC Directives.

4. FIRST AID MEASURES

Description of first aid measures:

Inhalation: Move affected person to fresh air at once. Get medical attention immediately.

Ingestion: Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Never give anything by mouth to an unconscious person. Do not induce vomiting. Get medical attention immediately.

Skin contact: Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention immediately.

Eye contact: Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

[cont...]

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Most important symptoms and effects, both acute and delayed:

Inhalation:	Inhalation of vapour or mist may cause lung oedema.
Ingestion:	Causes severe burns.
Skin contact:	Causes severe burns.
Eye contact:	Causes severe burns. This product is strongly corrosive. Immediate first aid is imperative.

Indication of any immediate medical attention and special treatment needed:

Notes for the doctor: No specific recommendations. If in doubt, get medical attention promptly.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Foam, carbon dioxide or dry powder.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture:

Specific hazards: Oxides of the following substances: Sulphur. Reactions with the following materials may generate heat: Water.

Hazardous combustion products: Fire or high temperatures create: Oxides of: Sulphur.

Advice for firefighters:

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation.

Environmental precautions: Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

Methods and material for containment and cleaning up:

Methods for cleaning up: Neutralise spilled material with crushed limestone, slaked lime (calcium hydroxide), soda ash (sodium carbonate) or sodium bicarbonate. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

Reference to other sections: Wear protective clothing as described in Section 8 of this safety data sheet.

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7. HANDLING AND STORAGE

Precautions for safe handling:

Usage precautions: Avoid spilling. Avoid contact with skin and eyes. Avoid inhalation of vapours and spray/mists. Provide adequate ventilation. Never add water directly to this product as it may cause a vigorous reaction or boiling. Always dilute by carefully pouring the product into water.

Conditions for safe storage, including any incompatibilities:

Storage precautions: May attack some plastics, rubber and coatings. Store in tightly-closed, original container in a well-ventilated place. Protect from freezing and direct sunlight. Do not store for long periods. Do not store in large quantities. Store away from the following materials: Reducing agents. Keep away from flammable and combustible materials. Moisture. Metals. Flammable/combustible materials.

Unsuitable container materials: Common metals.

Storage class: Corrosive storage.

Specific end use(s): The identified uses for this product are detailed in Section 1.2.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Occupational exposure limits:

Long-term exposure limit (8-hour TWA): WEL 0,05 mg/m³

Short-term exposure limit (15-minute): WEL 3 mg/m³

WEL = Workplace Exposure Limit.

DNEL: Industry - Inhalation; Short term local effects: 0.1 mg/m³
Industry - Inhalation; Long term local effects: 0.05 mg/m³

PNEC: Fresh water; 0.0025 mg/l
Sediment; 0.002 mg/l
Marine water; 0.00025 mg/l
Sediment (Marine water); 0.002 mg/l
STP; 8.8 mg/l

Exposure controls:

Protective equipment:



Appropriate engineering controls: Provide adequate general and local exhaust ventilation.

Eye/face protection: Wear chemical splash goggles. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. [cont...]

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- Hand protection:** The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Viton rubber (fluoro rubber). Thickness: 0.7 mm The selected gloves should have a breakthrough time of at least 8 hours. To protect hands from chemicals, gloves should comply with European Standard EN374.
- Other skin and body protection:** Wear suitable protective clothing as protection against splashing or contamination.
- Hygiene measures:** Provide eyewash station. Provide shower facilities near the workplace.
- Respiratory protection:** Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Gas filter, type E. EN 136/140/141/145/143/149.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

- Appearance:** Oily liquid. Hygroscopic. Liquid.
- Colour:** Colourless.
- Odour:** Odourless.
- Odour threshold:** No information available.
- pH:** pH (concentrated solution): <1
- Melting point:** -8°C - -35°C
- Initial boiling point and range:** 163°C - 338°C
- Flash point:** No information available.
- Evaporation rate:** No information available.
- Evaporation factor:** No information available.
- Flammability (solid, gas):** No information available.
- Upper/lower flammability or explosive limits:** No information available.
- Other flammability:** No information available.
- Vapour pressure:** 0.04 – 2.14 kPa
- Vapour density:** 3.4
- Relative density:** 1.41 - 1.83 @ 20°C
- Bulk density:** No information available.
- Solubility(ies):** Soluble in water.
- Partition coefficient:** log Pow: - 2.20
- Auto-ignition temperature:** No information available.
- Decomposition Temperature:** 274 – 340°C
- Viscosity:** 11 – 28 mPas @ 20°C
- Explosive properties:** Not considered to be explosive.
- Explosive under the influence of a flame:** No information available.
- Oxidising properties:** There are no chemical groups present in the products that are associated with oxidising properties.

[cont...]

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Other information:

Refractive index:	No information available.
Particle size:	No information available.
Molecular weight:	98.08
Volatility:	No information available.
Saturation concentration:	No information available.
Critical temperature:	No information available.
Volatile organic compound:	No information available.

10. STABILITY AND REACTIVITY

Reactivity: Reactions with the following materials may generate heat: Water Organic materials The following materials may react violently with the product: Flammable/combustible materials. Alkalis - inorganic. Alkalis - organic. The following materials may react with the product: Strong reducing agents.

Chemical stability:

Stability: Stable at normal ambient temperatures and when used as recommended. Reacts with water.

Possibility of hazardous reactions: Reactions with the following materials may generate heat: Water.

Conditions to avoid: Avoid excessive heat for prolonged periods of time. Avoid heat, flames and other sources of ignition. Water, moisture.

Incompatible materials:

Materials to avoid: Strong alkalis. Strong oxidising agents. Strong reducing agents. Water, steam, water mixtures. Amines. Alkalis – inorganic. Alkalis – organic. Metals Organic materials. Flammable/combustible materials.

Hazardous decomposition products: Oxides of the following substances: Sulphur. When water is added, the product reacts with a number of metals forming hydrogen gas, which may form explosive vapour/air mixtures.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity – oral:

Acute toxicity oral (LD₅₀ mg/kg): 2,140.0

Species: Rat

Skin corrosion/irritation:

Skin corrosion/irritation: Causes severe burns.

Serious eye damage/irritation:

Serious eye damage/irritation: Causes severe burns.

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Respiratory sensitisation:

Respiratory sensitisation: No information available.

Skin sensitisation:

Skin sensitisation: No information available.

Germ cell mutagenicity:

Genotoxicity - in vitro: No information available.

Carcinogenicity:

Carcinogenicity: No information available.

Reproductive toxicity:

Reproductive toxicity – fertility: No information available.

Specific target organ toxicity - single exposure:

STOT - single exposure: No information available.

Specific target organ toxicity - repeated exposure:

STOT - repeated exposure: No information available.

Aspiration hazard:

Aspiration hazard: No information available.

Inhalation:

Repeated exposure may cause chronic upper respiratory irritation. Tracheobronchitis, pulmonary oedema.

Ingestion:

Causes severe burns. Nausea, vomiting. Liquid irritates mucous membranes and may cause abdominal pain if swallowed.

Skin contact:

Causes burns. Corrosive. Prolonged contact causes serious tissue damage.

Eye contact:

Causes severe burns.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

Toxicity:

No information available.

Persistence and degradability:

The product contains only inorganic substances which are not biodegradable.

Bioaccumulative potential:

The product does not contain any substances expected to be bioaccumulating.

Partition coefficient:

log Pow: -2.20

[cont...]

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Mobility in soil:

Mobility: The product is soluble in water.

Results of PBT and vPvB assessment: This substance is not classified as PBT or vPvB according to current EU criteria.

Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

General information: Do not puncture or incinerate, even when empty. Waste is classified as hazardous waste.

Disposal methods: Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. TRANSPORT INFORMATION

General: Wear protective clothing as described in Section 8 of this safety data sheet.

UN number:

UN No. (ADR/RID): 1830

UN No. (IMDG): 1830

UN No. (ICAO): 1830

UN No. (ADN): 1830

UN proper shipping name:

Proper shipping name (ADR/RID): SULPHURIC ACID

Proper shipping name (IMDG): SULPHURIC ACID

Proper shipping name (ICAO): SULPHURIC ACID

Proper shipping name (ADN): SULPHURIC ACID

Transport hazard class(es):

ADR/RID class: 8

ADR/RID classification code: C1

ADR/RID label: 8

IMDG class: 8

ICAO class/division: 8

ADN class: 8

Transport labels:



[cont...]

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Packing group:

ADR/RID packing group: II
IMDG packing group: II
ICAO packing group: II
ADN packing group: II

Environmental hazards:

Environmentally hazardous substance/marine pollutant: No.

Special precautions for user:

EmS: F-A, S-B
ADR transport category: 2
Emergency Action Code: 2P
Hazard Identification Number (ADR/RID): 80
Tunnel restriction code: (E)

Transport in bulk according to Annex II of MARPOL and the IBC Code:

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not determined.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

EU legislation: Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.

Chemical safety assessment: A chemical safety assessment has been carried out.

Inventories:

EU - EINECS/ELINCS: All the ingredients are listed or exempt.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

[cont...]

16. OTHER INFORMATION**Abbreviations and acronyms used in the safety data sheet:**

ATE: Acute Toxicity Estimate.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

CAS: Chemical Abstracts Service.

DNEL: Derived No Effect Level.

IATA: International Air Transport Association.

IMDG: International Maritime Dangerous Goods.

Kow: Octanol-water partition coefficient.

LC₅₀: Lethal Concentration to 50 % of a test population.

LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).

PBT: Persistent, Bioaccumulative and Toxic substance.

PNEC: Predicted No Effect Concentration.

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.

RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.

vPvB: Very Persistent and Very Bioaccumulative.

IARC: International Agency for Research on Cancer.

MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.

cATpE: Converted Acute Toxicity Point Estimate.

BCF: Bioconcentration Factor.

BOD: Biochemical Oxygen Demand.

EC₅₀: 50% of maximal Effective Concentration.

LOAEC: Lowest Observed Adverse Effect Concentration.

LOAEL: Lowest Observed Adverse Effect Level.

NOAEC: No Observed Adverse Effect Concentration.

NOAEL: No Observed Adverse Effect Level.

NOEC: No Observed Effect Concentration.

LOEC: Lowest Observed Effect Concentration.

DMEL: Derived Minimal Effect Level.

EL50: Exposure Limit 50

hPa: Hectopascal

LL50: Lethal Loading fifty

OECD: Organisation for Economic Co-operation and Development

POW: Octanol-water partition coefficient

SCBA: self-contained breathing apparatus

STP: Sewage Treatment Plant

VOC: Volatile Organic Compounds

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Classification abbreviations and acronyms:

Acute Tox. = Acute toxicity

Aquatic Acute = Hazardous to the aquatic environment (acute)

Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Hazard statements in full:

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

Legal disclaimer:

The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.