



SAFETY DATA SHEET

SULPHURIC ACID 51 - 99%

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	SULPHURIC ACID 51 - 99%
Product number	22901
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 96% FCC ED. 7, 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%
REACH registration number	01-2119458838-20-XXXX
CAS number	7664-93-9
EU index number	016-020-00-8
EC number	231-639-5

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

Identified uses	Industrial application Chemical Intermediate Lab Reagent
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1.3. Details of the supplier of the safety data sheet

Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 sds@univar.com +44 1274 267306
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1.4. Emergency telephone number

Emergency telephone	SGS - +32 (0)3 575 55 55 (24h)
Sds No.	22901

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

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Physical hazards	Not Classified
Health hazards	Skin Corr. 1A - H314 Eye Dam. 1 - H318
Environmental hazards	Not Classified

2.2. Label elements

EC number 231-639-5

Pictogram



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.
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 comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313 Get medical advice/ attention.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1. 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.

3.2. Mixtures

Chemical Name Sulphuric acid

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air at once. Get medical attention.
Ingestion	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. 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.

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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.

4.2. 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. Causes severe skin burns and eye damage. Immediate first aid is imperative.

4.3. Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures

5.1. 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.

5.2. 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.

5.3. Advice for firefighters

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

SECTION 6: Accidental release measures

6.1. 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.

6.2. Environmental precautions

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.

6.3. 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.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

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7.1. 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.

7.2. 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.

7.3. Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. 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 (Marinewater); 0.002 mg/l

- STP; 8.8 mg/l

8.2. 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.

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.

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Respiratory protection	Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Gas filter, type E. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked.
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SECTION 9: Physical and Chemical Properties

9.1. 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	~18 - -35°C
Initial boiling point and range	163 - 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 mPa s @ 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 product that are associated with oxidising properties.

9.2. Other information

Refractive index	No information available.
Particle size	No information available.
Molecular weight	98.08

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Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. 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.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Reacts with water.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Reactions with the following materials may generate heat: Water
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10.4. Conditions to avoid

Conditions to avoid	Avoid excessive heat for prolonged periods of time. Avoid heat, flames and other sources of ignition. Water, moisture.
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10.5. 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.
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10.6. Hazardous decomposition products

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.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD ₅₀ mg/kg)	2,140.0
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Species	Rat
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Skin corrosion/irritation

Animal data	No information available.
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Serious eye damage/irritation

Serious eye damage/irritation	No information available.
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Respiratory sensitisation

Respiratory sensitisation	No information available.
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Skin sensitisation

Skin sensitisation	No information available.
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Germ cell mutagenicity

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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.

SECTION 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.

12.1. Toxicity

Toxicity No information available.

12.2. Persistence and degradability

Persistence and degradability The product contains only inorganic substances which are not biodegradable.

12.3. Bioaccumulative potential

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

Partition coefficient log Pow: -2.20

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment Not applicable. Substance is inorganic.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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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.

SECTION 14: Transport information

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

14.1. UN number

UN No. (ADR/RID)	1830
UN No. (IMDG)	1830
UN No. (ICAO)	1830
UN No. (ADN)	1830

14.2. 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

14.3. 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



14.4. Packing group

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

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

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

14.7. 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.

SECTION 15: Regulatory information

15.1. 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.

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

SECTION 16: Other information

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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

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
 Aquatic Acute = Hazardous to the aquatic environment (acute)
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and sources for data

Supplier's information.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

29/08/2017

Revision

08

Supersedes date

02/06/2017

SDS number

22901

SULPHURIC ACID 51 - 99%

Version number	2.002
SDS status	Approved.
Signature	J Spenceley
Hazard statements in full	H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.