

## SAFETY DATA SHEET

## Sulfuric Acid 51-98%

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

## 1.1. Product identifier

## Trade name

Sulfuric Acid 51-98%

## Other names / Synonyms

Concentrated sulfuric acid, Oil of vitriol, Sulphuric acid, Battery acid

Sulfuric acid above 15% w/w supplied by Industrial Chemicals Limited is a regulated explosive precursor. In relation to the supply of this material, Industrial Chemicals is required to verify that customers are legitimate professional / business users.

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

## Relevant identified uses of the substance or mixture

Treatment of drinking water, Intermediate, pH regulating, Manufacture of substance, Laboratory use, European Committee Approval, Plating and metal surface treatment agents, Pharmaceuticals  
Restricted to professional users.

## Uses advised against

None known.

## 1.3. Details of the supplier of the safety data sheet

## ▼ Company and address

**Industrial Chemicals Limited**

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Warley Hill Business Park,  
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sds@icgl.co.uk

## Revision

08/02/2024

## SDS Version

7.0

## Date of previous version

31/08/2023 (6.0)

## 1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).  
See section 4 "First aid measures".

## SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

## 2.1. Classification of the substance or mixture

Skin Corr. 1A; H314, Causes severe skin burns and eye damage.  
Eye Dam. 1; H318, Causes serious eye damage.

## 2.2. Label elements

### Hazard pictogram(s)



### Signal word

Danger

### Hazard statement(s)

Causes severe skin burns and eye damage. (H314)

### Precautionary statement(s)

General

-

### Prevention

Do not breathe vapour/mist. (P260)

Wear face protection/protective gloves/protective clothing. (P280)

### Response

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. (P305+P351+P338)

Immediately call a POISON CENTER/doctor. (P310)

### Storage

-

### Disposal

Dispose of contents/container in accordance with local regulation (P501)

### Hazardous substances

sulphuric acid ... %

### Additional labelling

Not applicable.

### 2.3. Other hazards

#### ▼ Additional warnings

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable. This product is a mixture.

### 3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
sulphuric acid ... %	CAS No.: 7664-93-9 EC No.: 231-639-5 UK-REACH: 20-5418564336-5-0000 Index No.: 016-020-00-8	60-100%	Skin Corr. 1A, H314	[1]
Water	CAS No.: 7732-18-5 EC No.: 231-791-2 UK-REACH: Index No.:	40-60%		

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

### Other information

[1] European occupational exposure limit.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

### General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

### Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

### ▼ Skin contact

Flush exposed area with water for a long time - at least 30 minutes. It may be necessary to flush for several hours. Use a comfortable water temperature (20-30 °C). Contact Poison Information/doctor/hospital for further advice on follow-up and treatment.

Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.

### Eye contact

If in eyes: Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Remove contact lenses. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.

### Ingestion

In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting unless this is recommended by a doctor. Hold head facing down to prevent vomit from returning to the mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.

### Burns

Not applicable.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms of inadvertent contact with products containing sulfuric acid are: extreme destruction of tissues of the mucous membranes and upper respiratory tract, eyes, and skin. Spasm, inflammation and edema of the larynx, Spasm, inflammation and edema of the bronchi.

Pneumonitis, pulmonary edema, burning sensation, cough, wheezing, laryngitis, Shortness of breath. Headache, Nausea, Vomiting. Effects may be delayed.

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

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

IF exposed or concerned:

Get immediate medical advice/attention.

### Information to medics

Bring this safety data sheet or the label from this product.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

### 5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Sulphur oxides

### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

Hazchem Code: 2P

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

## 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.  
Keep unauthorized persons away from the spill

## 6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

## 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid direct contact with the product.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

### 7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

#### Recommended storage material

Use containers made of the following materials: Suitable plastic material. Polyethylene-lined mild steel. bunded mild steel tanks, or plastic drums/IBCs

#### Storage temperature

Dry, cool and well ventilated

#### Incompatible materials

Alkali

Strong oxidizing agents

Caustic products

### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

sulphuric acid ... %

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 0,05 (Mist) (Thoracic fraction)

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

#### DNEL

No data available.

#### PNEC

No data available.

### 8.2. ▼ Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

#### General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

#### Exposure scenarios

There are no exposure scenarios implemented for this product.

#### Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

#### Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

Ensure that eyewash stations and safety showers are located within easy reach.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

#### ▼ Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

**Measures to avoid environmental exposure**

Keep damming materials near the workplace. If possible, collect spillage during work.

**Individual protection measures, such as personal protective equipment**

**Generally**


Use only UKCA marked protective equipment.

**Respiratory Equipment**

Type	Class	Colour	Standards
Respiratory protection is not needed in the event of adequate ventilation.			

**Skin protection**

Recommended	Type/Category	Standards
Chemical suit, PVC		




**Hand protection**

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.			

**Eye protection**

Type	Standards
Face shield	EN166



Chemical splash goggles

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

**Physical state**

Liquid

**Colour**

Colourless

**Odour / Odour threshold**

Odourless

**pH**

<0.1

**Density (g/cm<sup>3</sup>)**

1835

**Relative density**

1835 (20 °C)

**Kinematic viscosity**

10 cP (20 °C)

**Particle characteristics**

Does not apply to liquids.

**Phase changes**

Melting point/Freezing point (°C)

-14°C for 96% Concentration

Softening point/range (waxes and pastes) (°C)

Does not apply to liquids.

Boiling point (°C)

303

Vapour pressure

0.485 hPa (20 °C)

Relative vapour density

Testing not relevant or not possible due to the nature of the product.

Decomposition temperature (°C)

Testing not relevant or not possible due to the nature of the product.

Data on fire and explosion hazards

Flash point (°C)

Testing not relevant or not possible due to the nature of the product.

Flammability (°C)

Testing not relevant or not possible due to the nature of the product.

Auto-ignition temperature (°C)

Testing not relevant or not possible due to the nature of the product.

Lower and upper explosion limit (% v/v)

Testing not relevant or not possible due to the nature of the product.

Solubility

Solubility in water

soluble in water

n-octanol/water coefficient (LogKow)

Testing not relevant or not possible due to the nature of the product.

Solubility in fat (g/L)

Testing not relevant or not possible due to the nature of the product.

9.2. Other information

Sensitivity to shock

Reacts violently with water

Thermal stability

Stable at normal ambient temperatures and when used as recommended

Oxidizing properties

Testing not relevant or not possible due to the nature of the product.

Other physical and chemical parameters

Avoid exposure to high temperatures or direct sunlight

## SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Alkali

Strong oxidizing agents

Caustic products

10.6. Hazardous decomposition products

Thermal decomposition may produce corrosive vapours.

## SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

Acute toxicity

Based on available data, the classification criteria are not met.

#### Skin corrosion/irritation

Causes severe skin burns and eye damage.

#### Serious eye damage/irritation

Causes serious eye damage.

#### Respiratory sensitisation

Based on available data, the classification criteria are not met.

#### Skin sensitisation

Based on available data, the classification criteria are not met.

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

Based on available data, the classification criteria are not met.

#### Aspiration hazard

Based on available data, the classification criteria are not met.

### 11.2. Information on other hazards

#### Long term effects

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

#### ▼ Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

#### Other information

sulphuric acid ... % has been classified by IARC as a group 1 carcinogen.

## SECTION 12: Ecological information

### 12.1. Toxicity

No data available.

### 12.2. ▼ Persistence and degradability

Based on available data, the classification criteria are not met.

### 12.3. ▼ Bioaccumulative potential

Based on available data, the classification criteria are not met.

### 12.4. Mobility in soil

No data available.

### 12.5. ▼ Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

### 12.6. ▼ Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

### 12.7. Other adverse effects

None known.

## SECTION 13: Disposal considerations

#### Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 8 – Corrosive

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

#### EWC code




Not applicable.

#### Specific labelling

### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

## SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	UN1830	SULPHURIC ACID with more than 51% acid	Transport hazard class: 8 Label: 8 Classification code: C1 	II	No	Limited quantities: 1 L Tunnel restriction code: (E) See below for additional information.
IMDG	UN1830	SULPHURIC ACID with more than 51% acid	Transport hazard class: 8 Label: 8 Classification code: C1 	II	No	Limited quantities: 1 L EmS: F-A S-B See below for additional information.
IATA	UN1830	SULPHURIC ACID with more than 51% acid	Transport hazard class: 8 Label: 8 Classification code: C1 	II	No	See below for additional information.

\* Packing group

\*\* Environmental hazards

#### Additional information

ADR / See Table A, section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.

Hazchem Code: 2P

#### 14.6. Special precautions for user

Not applicable.

#### 14.7. Maritime transport in bulk according to IMO instruments

No data available.

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Restrictions for application

Restricted to professional users.

People under the age of 18 shall not be exposed to this product.

#### Demands for specific education

No specific requirements.

#### SEVESO - Categories / dangerous substances

Not applicable.

#### Regulation on drug precursors



sulphuric acid ... % is included (Category 3)

[Regulation on explosives precursors](#)

sulphuric acid ... % (Annex I)

[Additional information](#)

Not applicable.

[Sources](#)

The Management of Health and Safety at Work Regulations 1999.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

The Controlled Drugs (Drug Precursors) Regulations 2008.

Council Regulation (EC) No 2019/1148 on explosives precursors as retained and amended in UK law.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

[15.2. Chemical safety assessment](#)

No

SECTION 16: Other information

[Full text of H-phrases as mentioned in section 3](#)

H314, Causes severe skin burns and eye damage.

[▼ Abbreviations and acronyms](#)

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne (European conformity)

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EuPCS = European Product Categorisation System

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

[Additional information](#)

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation

methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

▼ [The safety data sheet is validated by](#)

M Bartlett

**Other**

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en