



SAFETY DATA SHEET Sulphuric Acid >70% w/w

According to Regulation (EU) No 453/2010

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name	Sulphuric Acid >70% w/w
Product No.	00234188
REACH Registration number	01-2119458838-20-XXXX
CAS-No.	7664-93-9
EU Index No.	016-020-00-8
EC No.	231-639-5

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

Identified uses	Chemical intermediate, processing aid, pH regulating agent, batteries, pharmaceuticals, galvanising, etching, flue gas scrubber, laboratory chemical.
Uses advised against	No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier	KOPPERS SPECIALTY CHEMICALS. Normanby Gateway, Lysaghts Way. Scunthorpe . North Lincolnshire . DN15 9YG United Kingdom. Tel +44(0)1724 281555 E mail; euorgkscsds@koppers.eu
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1.4. Emergency telephone number

NCEC +44(0)1865 407333

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Not classified.
Human health	Skin Corr. 1A - H314
Environment	Not classified.

Classification (1999/45/EEC)

C;R35.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

2.2. Label elements

EC No. 231-639-5

Label In Accordance With (EC) No. 1272/2008



Signal Word

Danger

Sulphuric Acid >70% w/w

Hazard Statements

H314 Causes severe skin burns and eye damage.

Precautionary Statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P260 Do not breathe vapour/spray.
P264 Wash contaminated skin thoroughly after handling.
P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P501 Dispose of contents/container in accordance with national regulations.

2.3. Other hazards

Not Classified as PBT/vPvB by current EU criteria. The product reacts with water and will generate heat.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

SULPHURIC ACID ...%		70-100%
CAS-No.: 7664-93-9	EC No.: 231-639-5	Registration Number: 01-2119458838-20-XXXX
Classification (EC 1272/2008) Skin Corr. 1A - H314	Classification (67/548/EEC) C;R35	
WATER		0-30%
CAS-No.: 7732-18-5	EC No.: 231-791-2	
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Not classified.	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

REACH Registration number 01-2119458838-20-XXXX
CAS-No. 7664-93-9
EU Index No. 016-020-00-8
EC No. 231-639-5

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information

CAUTION! First aid personnel must be aware of own risk during rescue!

Inhalation

Remove victim immediately from source of exposure. Provide fresh air, warmth and rest, preferably in a comfortable upright sitting position. Place unconscious person on the side in the recovery position and ensure breathing can take place. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention immediately!

Ingestion

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Do not induce vomiting. Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Get medical attention immediately!

Skin contact

Remove contaminated clothes and rinse skin thoroughly with water. Continue to rinse for at least 15 minutes. Get medical attention immediately! Chemical burns must be treated by a physician.

Sulphuric Acid >70% w/w

Eye contact

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. 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

General information

If adverse symptoms develop as described the casualty should be transferred to hospital as soon as possible.

Inhalation

Vapours irritate the respiratory system, and may cause coughing and difficulties in breathing. Severe irritation in nose and throat. Inhalation of vapour or mist may cause lung oedema.

Ingestion

Highly Corrosive. May cause chemical burns in mouth and throat.

Skin contact

Burning pain and severe corrosive skin damage.

Eye contact

Strongly corrosive. Causes severe burns and serious eye damage. Immediate first aid is imperative.

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

Vapours are corrosive. After 24-36 hours, injured persons may develop serious shortness of breath and lung oedema. Corrosive to skin. Important to remove the substance from the skin immediately.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

None known. Use fire-extinguishing media appropriate for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

When heated, toxic and corrosive vapours/gases may be formed. Sulphurous gases (SO_x).

Unusual Fire & Explosion Hazards

If heated, volume and pressure increases strongly, resulting in explosion of container. The product reacts with water and will generate heat.

Specific hazards

Water used for fire extinguishing, which has been in contact with the product, may be corrosive. The product reacts with water and will generate heat.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Keep up-wind to avoid fumes. Move container from fire area if it can be done without risk. Use water SPRAY only to cool containers! Do not put water on leaked material. Do not get water inside container. Keep run-off water out of sewers and water sources. Dike for water control.

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

DO NOT touch spilled material. Use protective gloves, goggles and suitable protective clothing. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation. In case of inadequate ventilation, use respiratory protection. The product reacts with water and will generate heat.

6.2. Environmental precautions

Prevent discharge of larger quantity to drain.

6.3. Methods and material for containment and cleaning up

Large Spillages: Wear necessary protective equipment. Stop leak if possible without risk. DO NOT touch spilled material! Absorb in vermiculite, dry sand or earth and place into containers. Shovel into dry containers. Cover and move the containers. Flush the area with water. Small Spillages: Small quantities may be flushed to drains with plenty of water.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid inhalation of vapours/spray and contact with skin and eyes. Wear necessary protective equipment. Provide good ventilation. Observe occupational exposure limits and minimise the risk of inhalation of vapours and mist. Observe good chemical hygiene practices. Eye wash facilities and emergency shower must be available when handling this product.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. Protect against physical damage and/or friction. Store away from: Alkalis. When water is added, the product reacts with a number of metals forming hydrogen gas, which may form explosive vapour/air mixtures.

Storage Class

Corrosive storage.

7.3. 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

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
SULPHURIC ACID ...%	WEL		0,05 mg/m ³			

WEL = Workplace Exposure Limit.

DNEL

Industry	Inhalation.	Long Term	Local Effects	0.05 mg/m ³
Industry	Inhalation.	Short Term	Local Effects	0.1 mg/m ³

PNEC

Sediment (Freshwater)	2.5	µg/l
Marinewater	0.25	µg/l
STP	8.8	mg/l

SULPHURIC ACID ...% (CAS: 7664-93-9)

DNEL

Workers	Inhalation.	Long Term	Local Effects	0.05 mg/m ³
Workers	Inhalation.	Short Term	Local Effects	0.1 mg/m ³

PNEC

Freshwater	0.0025	mg/l
Marinewater	0.00025	mg/l
STP	8.8	mg/l
Sediment (Freshwater)	0.002	mg/kg sediment dw
Sediment (Marinewater)	0.002	mg/kg sediment dw

8.2. Exposure controls

Protective equipment



Engineering measures

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. All handling to take place in well-ventilated area.

Respiratory equipment

Respiratory protection must be used if air contamination exceeds acceptable level. Use respiratory equipment with gas filter, type E. (EN14387) At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used.

Sulphuric Acid >70% w/w

Hand protection

Wear protective gloves. (EN374) Use protective gloves made of: Viton rubber (fluor rubber). (0.4 mm) (permeation time \geq 8 hours) Butyl rubber. (0.5 mm) (permeation time \geq 2 hours) Discard gloves as soon as any signs of degradation are noticed. Unsuitable glove materials: Polyvinyl chloride (PVC). Nitrile. Rubber (natural, latex).

Eye protection

Wear approved safety goggles. (EN166) Use face shield in case of splash risk.

Other Protection

Provide eyewash station and safety shower. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Hygiene measures

Promptly remove non-impervious clothing that becomes wet or contaminated. Wash promptly with soap & water if skin becomes contaminated. Contaminated clothing to be placed in closed container until disposal or decontamination. Warn cleaning personnel of chemical's hazardous properties. Wash hands at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

Skin protection

Protection suit must be worn.

Environmental Exposure Controls

Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Colourless.
Odour	Almost odourless.
Solubility	Miscible with water The product reacts violently with water and will generate heat.
Initial boiling point and boiling range (°C)	164 °C (70 %), 327 °C (100 %) @ 1013 hPa
Melting point (°C)	- 13°C (77%), 0 °C (98 %)
Relative density	1.61 (70 %) -1.84 (98 %) @ 16 °C
Vapour density (air=1)	
Not applicable.	
Vapour pressure	0.485 hPa @ 20°C
Evaporation rate	
Not relevant	
	The product is non-volatile.
pH-Value, Conc. Solution	< 1
Viscosity	10 cP (70%) - 28 cP (100%) @ 20°C
Decomposition temperature (°C)	
Not relevant	
Flash point (°C)	
Will not flash.	
Auto Ignition Temperature (°C)	
Not applicable.	
	This product is not flammable.
Flammability Limit - Lower(%)	
Not relevant	
	This product is not flammable.
Flammability Limit - Upper(%)	
Not relevant	
	This product is not flammable.
Partition Coefficient (N-Octanol/Water)	
Not Applicable - Inorganic chemical.	
Explosive properties	
Not considered to be explosive.	
Oxidising properties	
Does not meet the criteria for oxidising.	

9.2. Other information

No information required.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

The product reacts violently with water and will generate heat. When water is added, the product reacts with a number of metals forming hydrogen gas, which may form explosive vapour/air mixtures.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

Do not add water directly to the product. It may cause a violent reaction.

10.5. Incompatible materials

Materials To Avoid

Strong alkalis. Strong oxidising substances. Strong reducing agents. Alkali metals. Amines. Hydrocarbons - halogenated.

10.6. Hazardous decomposition products

Fire or high temperatures create: Sulphurous gases (SO_x).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity:

Acute Toxicity (Oral LD₅₀)

2140 mg/kg Rat

This substance is corrosive.

Based on available data the classification criteria are not met.

Acute Toxicity (Dermal LD₅₀)

Not determined.

This substance is corrosive.

Based on available data the classification criteria are not met.

Acute Toxicity (Inhalation LC₅₀)

0.375 mg/l (dust/mist) Rat 4 hours

This substance is corrosive.

Based on available data the classification criteria are not met.

Skin Corrosion/Irritation:

Skin Corr. 1A Causes severe skin burns and eye damage.

Serious eye damage/irritation:

Causes severe burns.

Respiratory or skin sensitisation:

Respiratory sensitisation

There is no evidence that the material can lead to respiratory hypersensitivity.

Skin sensitisation

Based on available data the classification criteria are not met.

Epidemiological studies have shown no evidence of skin sensitisation.

Germ cell mutagenicity:

Genotoxicity - In Vitro

Bacterial Reverse Mutation Test

Negative.

This substance has no evidence of mutagenic properties.

Carcinogenicity:

Occupational exposure to sulphuric acid mist with a particle size range within the thoracic fraction (< 25 mm AED) is carcinogenic to man, causing cancer of the larynx and the lung.

Target organ for carcinogenicity

Larynx. Respiratory system, lungs (spray mists)

IARC Carcinogenicity

IARC Group 1 Carcinogenic to humans.

Reproductive Toxicity:

This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure:

Not classified as a specific target organ toxicant after a single exposure. This substance is corrosive. Inhalation of vapour or mist may cause lung oedema. Spray mists irritate the respiratory system, and cause coughing and difficulties in breathing.

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure

NOAEC 0.3 mg/m³ Inhalation.

Not classified as a specific target organ toxicant after repeated exposure. This substance is corrosive. Repeated exposure may cause chronic upper respiratory irritation.

Aspiration hazard:

Based on available data the classification criteria are not met. This substance is corrosive. Inhalation of vapour or mist may cause lung oedema.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Acute Fish Toxicity

Substantial amounts of the product may lead to a local change in acidity in small water systems which may have adverse effects on aquatic organisms.

Acute Toxicity - Fish

LC50 96 hours 16 mg/l *Lepomis macrochirus* (Bluegill)

Acute Toxicity - Aquatic Invertebrates

EC50 48 hours > 100 mg/l *Daphnia magna*

Acute Toxicity - Aquatic Plants

NOEC 72 hours > 100 mg/l *Desmodesmus subspicatus*

Acute Toxicity - Microorganisms

LOEC 21 days. 100 mg/l Total bacteria.

NOEC 21 days. 88 mg/l Total bacteria.

12.2. Persistence and degradability

Stability (Hydrolysis)

Not applicable.

Substance is inorganic

Biodegradation

Not Applicable - Inorganic chemical.

12.3. Bioaccumulative potential

Bioaccumulative potential

Will not bio-accumulate.

Partition coefficient

Not Applicable - Inorganic chemical.

12.4. Mobility in soil

Mobility:

The product is miscible with water. May spread in water systems.

12.5. Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

No information required.

SECTION 13: DISPOSAL CONSIDERATIONS**General information**

When handling waste, consideration should be made to the safety precautions applying to handling of the product. The packaging must be empty (drop-free, when inverted).

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

Waste Class

EWG - code: 06 01 01 (waste from inorganic chemical processes, MFSU of acids, sulphuric acid).

SECTION 14: TRANSPORT INFORMATION**14.1. UN number**

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

14.2. UN proper shipping name

Proper Shipping Name	SULPHURIC ACID
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14.3. Transport hazard class(es)

ADR/RID/ADN Class	8
ADR/RID/ADN Class	Class 8: Corrosive substances.
ADR Label No.	8
IMDG Class	8
ICAO Class/Division	8
Transport Labels	



ADN Class	8 (N3)
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14.4. Packing group

ADR/RID/ADN Packing group	II
IMDG 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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Sulphuric Acid >70% w/w

Emergency Action Code	2P
Hazard No. (ADR)	80
Tunnel Restriction Code	(E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No information required.

Pollution Category (IBC)	Category Y
Ship Type (IBC)	Ship Type 3 (IMO3)

SECTION 15: REGULATORY INFORMATION

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

EU Legislation

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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

Authorisations (Title VII Regulation 1907/2006)

No specific authorisations are noted for this product.

Restrictions (Title VIII Regulation 1907/2006)

No specific restrictions of use are noted for this product.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Date	14/11/2013
Revision	3
Supersedes date	19/02/2013
Risk Phrases In Full	
R35	Causes severe burns.
NC	Not classified.
Hazard Statements In Full	
H314	Causes severe skin burns and eye damage.

Disclaimer

The information set forth in this Safety Data Sheet does not purport to be all-inclusive and should be used only as a guide. Whilst the information and recommendations set forth herein are believed to be accurate, the company makes no warranty regarding such information and recommendations and disclaims all liability from reliance thereon.