

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

Sulphuric acid $\geq 96\%$

Version 1.0

Print Date 2013/05/03

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MSDS code: **MAAF124**

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

1.1. Product identifier

Trade name : Sulphuric acid $\geq 96\%$
 Substance name : sulphuric acid
 Index-No. : 016-020-00-8
 CAS-No. : 7664-93-9
 EC-No. : 231-639-5
 Registration number : 01-2119458838-20-xxxx

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

Use of the Substance/Mixture : Identified use: See table in front of appendix for a complete overview of identified uses.
 Uses advised against : At this moment we have not identified any uses advised against

1.3. Details of the supplier of the safety data sheet

Company : Brenntag UK & Ireland
 Albion House, Rawdon Park
 GB LS19 7XX Leeds Yeadon
 Telephone : +44 (0) 113 3879 200
 Telefax : +44 (0) 113 3879 280
 E-mail address : msds@brenntag.co.uk

1.4. Emergency telephone number

Emergency telephone number : Emergency only telephone number (open 24 hours):
 +44 (0) 1865 407333 (N.C.E.C. Culham)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008			
Hazard class	Hazard category	Target Organs	Hazard statements
Skin corrosion	Category 1A	---	H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

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Classification according to EU Directives 67/548/EEC or 1999/45/EC

Directive 67/548/EEC or 1999/45/EC	
Hazard symbol / Category of danger	Risk phrases
Corrosive (C)	R35


For the full text of the R-phrases mentioned in this Section, see Section 16.

Most important adverse effects

- Human Health : See section 11 for toxicological information.
- Physical and chemical hazards : See section 9 for physicochemical information.
- Potential environmental effects : See section 12 for environmental information.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

- Hazard symbols : 
- Signal word : Danger
- Hazard statements : H314 Causes severe skin burns and eye damage.
- Precautionary statements
- Prevention : P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response : P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ 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.
 P308
 P310 IF exposed or concerned: Immediately call a POISON CENTER or doctor/ physician.

Hazardous components which must be listed on the label:

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- sulphuric acid

2.3. Other hazards

For Results of PBT and vPvB assessment see section 12.5.

Section 3: Composition/information on ingredients

3.1. Substances

Chemical nature : Aqueous solution

Hazardous components	Amount [%]	Classification (REGULATION (EC) No 1272/2008)		Classification (67/548/EEC)
		Hazard class / Hazard category	Hazard statements	
sulphuric acid				
Index-No. : 016-020-00-8		Skin Corr.1A	H314	Corrosive; C; R35
CAS-No. : 7664-93-9				
EC-No. : 231-639-5	≥ 96			
Registration : 01-2119458838-20-xxxx				
C&L-No. : 02-2119752444-38-0000				

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4: First aid measures

4.1. Description of first aid measures

- General advice : Take off all contaminated clothing immediately.
- If inhaled : In case of accident by inhalation: remove casualty to fresh air and keep at rest. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.
- In case of skin contact : First swab the concentrated acid with dry pulp or textile; because the acid reacts vigorously with water and with strong evolution of heat. Wash off with plenty of water. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.
- If swallowed : Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician immediately.

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

Symptoms : See Section 11 for more detailed information on health effects and symptoms.

Effects : See Section 11 for more detailed information on health effects and symptoms.

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

Treatment : Treat symptomatically.

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.

Unsuitable extinguishing media : No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting : May decompose in a fire giving off toxic fumes, Hazardous decomposition products, Sulphur oxides, Reacts exothermic with water

5.3. Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Wear appropriate body protection (full protective suit)

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Cool closed containers exposed to fire with water spray.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment. Provide adequate ventilation. Avoid contact with skin and eyes. Do not breathe vapours or spray mist.

6.2. Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and materials for containment and cleaning up

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- Methods and materials for containment and cleaning up : Neutralize with soda and flush with plenty of water. Taking into account local regulations the product may be disposed of as waste water after neutralisation. Clean-up methods - small spillage: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders). Keep in suitable, closed containers for disposal.
- Further information : Treat recovered material as described in the section "Disposal considerations".

6.4. Reference to other sections

- See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment.
See Section 13 for waste treatment information.

Section 7: Handling and storage

7.1. Precautions for safe handling

- Advice on safe handling : Keep container tightly closed. Use personal protective equipment. Avoid contact with the skin and the eyes. Do not breathe vapours or spray mist. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity. When diluting, always add the product to water. Never add water to the product.
- Hygiene measures : Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist.

7.2. Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Keep in an area equipped with acid resistant flooring. Store in original container.
- Advice on protection against fire and explosion : The product is not flammable. Normal measures for preventive fire protection. Gives off hydrogen by reaction with metals. Risk of explosion.
- Further information on storage conditions : Keep tightly closed in a dry and cool place. Keep in a well-ventilated place. Product is hygroscopic.
- Advice on common storage : Keep away from food, drink and animal feedingstuffs. Keep away from combustible material.

7.3. Specific end use(s)

- Specific use(s) : Identified use: See table in front of appendix for a complete overview of identified uses.

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Section 8: Exposure controls/personal protection

8.1. Control parameters

Component:	sulphuric acid	CAS-No. 7664-93-9
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Other Occupational Exposure Limit Values

EU ELV, Time Weighted Average (TWA):, Mist.
0.05 mg/m³
Indicative

EH40 WEL, Time Weighted Average (TWA):
0.05 mg/m³
Mist.
Thoracic fraction.

ELV (IE), Time Weighted Average (TWA):, Mist.
0.05 mg/m³
Indicative OELV

8.2. Exposure controls

Appropriate engineering controls

Refer to protective measures listed in sections 7 and 8.

Personal protective equipment

Respiratory protection

Advice : Required if vapours or aerosol are released.
Recommended Filter type:
Combination filter:E-P2

Hand protection

Advice : The glove material has to be impermeable and resistant to the product / the substance / the preparation.
Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Protective gloves should be replaced at first signs of wear.
The following materials are suitable:

Material : Fluorinated rubber
Break through time : ≥ 8 h
Glove thickness : 0.5 mm

Material : butyl-rubber
Break through time : ≥ 2 h

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Glove thickness : 0.5 mm

Eye protection

Advice : Tightly fitting safety goggles

Skin and body protection

Advice : Acid resistant protective clothing.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.
If the product contaminates rivers and lakes or drains inform respective authorities.
Local authorities should be advised if significant spillages cannot be contained.

Section 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Form : liquid

Colour : colourless
or
slight
coloured

Odour : odourless

Odour Threshold : no data available

pH : < 1 (20 °C)

Solidification point : ca. 8 °C

Boiling point/boiling range : ca. 290 °C

Flash point : not applicable

Evaporation rate : no data available

Flammability (solid, gas) : The product is not flammable.

Upper explosion limit : not applicable

Lower explosion limit : not applicable

Vapour pressure : < 0.01 hPa (20 °C)

Relative vapour density : 3.4

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Density	:	1.84 g/cm ³ (20 °C)
Water solubility	:	completely miscible
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	not applicable
Thermal decomposition	:	ca. 338 °C
Viscosity, dynamic	:	21 mPa.s
Viscosity, kinematic	:	no data available
Explosivity	:	Product is not explosive.
Oxidizing properties	:	no data available

9.2. Other information

Molecular Weight	:	98.1 g/mol
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Section 10: Stability and reactivity**10.1. Reactivity**

Advice	:	Is corrosive to metals.
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10.2. Chemical stability

Advice	:	Stable under normal conditions.
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10.3. Possibility of hazardous reactions

Hazardous reactions	:	Gives off hydrogen by reaction with metals. Reacts exothermic with water
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10.4. Conditions to avoid

Conditions to avoid	:	Reacts with the following substances: Bases, Water
Thermal decomposition	:	ca. 338 °C

10.5. Incompatible materials

Materials to avoid	:	Organic materials, Bases, Reducing agents, Metals
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10.6. Hazardous decomposition products

Hazardous decomposition products	:	Sulphur oxides, Stable under recommended storage conditions.
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Section 11: Toxicological information

11.1. Information on toxicological effects

Further information

Other relevant toxicity information : If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Component:	sulphuric acid	CAS-No.
		7664-93-9

Acute toxicity

Oral

LD50 Oral : 2140 mg/kg (rat, male and female) (OECD Test Guideline 401)

Inhalation

no data available

Dermal

no data available

Irritation

Skin

Result : Very corrosive (rabbit)

Eyes

Result : Very corrosive (rabbit)
Risk of serious damage to eyes.

Sensitisation

Result : no data available

CMR effects

CMR Properties

Carcinogenicity : Animal testing did not show any carcinogenic effects.

Mutagenicity : It is not considered mutagenic.

Teratogenicity : Did not show teratogenic effects in animal experiments.

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Reproductive toxicity : Animal testing did not show any effects on fertility.

Specific Target Organ Toxicity

Single exposure

remark : The substance or mixture is not classified as specific target organ toxicant, single exposure.

Repeated exposure

remark : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Other toxic properties

Aspiration hazard

No aspiration toxicity classification

Section 12: Ecological information

12.1. Toxicity

Component:	sulphuric acid	CAS-No.
		7664-93-9

Acute toxicity

Fish

LC50 : 42 mg/l (Gambusia affinis; 96 h)

Toxicity to daphnia and other aquatic invertebrates

EC50 : 29 mg/l (Daphnia magna; 24 h)

EC50 : 70 - 80 mg/l (Crangon crangon (shrimp); 48 h)

algae

no data available

Bacteria

EC50 : 58 mg/l (activated sludge; 120 h)

12.2. Persistence and degradability

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Component:	sulphuric acid	CAS-No.
		7664-93-9

Persistence and degradability

Persistence

Result : no data available

Biodegradability

Result : The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Component:	sulphuric acid	CAS-No.
		7664-93-9

Bioaccumulation

Result : no data available

12.4. Mobility in soil

Component:	sulphuric acid	CAS-No.
		7664-93-9

Mobility

: no data available

12.5. Results of PBT and vPvB assessment

Component:	sulphuric acid	CAS-No.
		7664-93-9

Results of PBT and vPvB assessment

Result : not applicable

12.6. Other adverse effects

Additional ecological information

Result : Harmful effects to aquatic organisms due to pH-shift. Neutralization is normally necessary before waste water is

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discharged into water treatment plants.
Do not flush into surface water or sanitary sewer system.

Section 13: Disposal considerations

13.1. Waste treatment methods

- Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.
- Contaminated packaging : Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Packagings that cannot be cleaned are to be disposed of in the same manner as the product.
- European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

Section 14: Transport information

14.1. UN number

1830

14.2. UN proper shipping name

- ADR : SULPHURIC ACID with more than 51% acid
RID : SULPHURIC ACID with more than 51% acid
IMDG : SULPHURIC ACID WITH MORE THAN 51% ACID

14.3. Transport hazard class(es)

- ADR-Class : 8
(Labels; Classification Code; Hazard identification No; Tunnel restriction code) 8; C1; 80; (E)
- RID-Class : 8
(Labels; Classification Code; Hazard identification No) 8; C1; 80
- IMDG-Class : 8
(Labels; EmS) 8; F-A, S-B

14.4. Packaging group

- ADR : II
RID : II
IMDG : II

14.5. Environmental hazards

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Labeling according to 5.2.1.8 ADR	: no
Labeling according to 5.2.1.8 RID	: no
Labeling according to 5.2.1.6.3 IMDG	: no
Classification as environmentally hazardous according to 2.9.3 IMDG	: no
Classified as "P" according to 2.10 IMDG	: no

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG : Not applicable.

Section 15: Regulatory information

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

:

Notification status

sulphuric acid:

Regulatory List	Notification	Notification number
AICS	YES	
DSL	YES	
INV (CN)	YES	
ENCS (JP)	YES	(1)-430
ISHL (JP)	YES	(1)-430
TSCA	YES	
EINECS	YES	231-639-5
KECI (KR)	YES	97-1-405
KECI (KR)	YES	KE-32570
PICCS (PH)	YES	

15.2. Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this substance.

Section 16: Other information

Full text of R-phrases referred to under sections 2 and 3.

R35 Causes severe burns.

Full text of H-Statements referred to under sections 2 and 3.

H314 Causes severe skin burns and eye damage.

Sulphuric acid $\geq 96\%$ **Further information**

Other information : Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use. The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship.

The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

|| Indicates updated section.

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