Sulfuric acid 98% AGR

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Date of issue: 17/01/2013 Revision date: 19/06/2025 Supersedes version of: 17/11/2022 Version: 2.4

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

1.1. Product identifier

Product form	:	Substance
Trade name	:	Sulfuric acid 98% AGR
Chemical name	:	sulphuric acid … %
IUPAC name	:	sulphuric acid
EC Index-No.	:	016-020-00-8
EC-No.	:	231-639-5
CAS-No.	:	7664-93-9
REACH registration No	:	01-2119458838-20
Product code	:	SUAC-00A
Formula	:	H2SO4

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

Relevant identified uses

Main use category	:	Laboratory use

1.3. Details of the supplier of the safety data sheet

labbox labware s.l.
Migjorn, 1
P.O. Box Barcelona (SPAIN)
08338 Premia de Dalt, SPAIN
ES
T +34 937 07 79 70, F +34 937 909 532
info@labbox.com, www.labbox.com

1.4. Emergency telephone number

Emergency number	:	+34 937 077 970 (For technical information_Office Hours) In case of medical emergency phone 112 or to your local emergency number.

Country/Area	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 1A H314
Full text of H and EUH statements: see section 16
Specific concentration limits (%):
(5 ≤ C < 15) Eye Irrit. 2; H319
(5 ≤ C < 15) Skin Irrit. 2; H315
(15 ≤ C < 100) Skin Corr. 1A; H314

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS05

Signal word (CLP) : Danger

Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP) : P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P309+P311 - IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%
Sulfuric acid	CAS-No.: 7664-93-9 EC-No.: 231-639-5 EC Index-No.: 016-020-00-8 REACH-no: 01-2119458838-20	≥ 15

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. Get medical advice/attention.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist.

First-aid measures after ingestion : Rinse mouth out with water. Do not induce vomiting. Give nothing or a little water to drink. Get medical advice/attention.

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

Symptoms/effects after skin contact : Causes severe burns.

Symptoms/effects after eye contact : Causes serious eye burns.

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

Never give anything by mouth to an unconscious person.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : ABC-powder.

Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Non combustible.

Hazardous decomposition products in case of fire : Hazardous gas/vapours are formed in the event of decomposition (see section 10).

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not inhale vapour. Avoid contact with skin and eyes.

For non-emergency personnel

Emergency procedures : Do not breathe vapours. Ventilate spillage area.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Collect spillage. Mechanically recover the product. On land, sweep or shovel into suitable containers.

6.4. Reference to other sections

See Heading 8. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin. Do not breathe vapours.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store in a well-ventilated place. Keep container tightly closed.

Storage area : Store in a well-ventilated place. Store away from heat.

Special rules on packaging : Store in a closed container. Keep only in original container.

7.3. Specific end use(s)

Laboratory chemicals.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Sulfuric acid 98% AGR (7664-93-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Sulphuric acid (mist)
IOEL TWA	0,05 mg/m³
France - Occupational Exposure Limits	
Local name	Acide sulfurique
VME (OEL TWA)	0,05 mg/m³ (fraction thoracique)
VLE (OEL Ceiling/STEL)	3 mg/m³ (fraction thoracique)
Remark	VME règlementaire indicative; VLE recommandée/admise
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Schwefelsäure
AGW (OEL TWA)	0,1 mg/m³ E (mg/m3)
Remark	DFG,EU,Y
Italy - Occupational Exposure Limits	
Local name	Acido solforico (nebulizzazione)
OEL TWA	0,05 mg/m³
Portugal - Occupational Exposure Limits	
Local name	Ácido sulfúrico
OEL TWA	0,2 mg/m³ T (Fração torácica)
Spain - Occupational Exposure Limits	
Local name	Ácido sulfúrico
VLA-ED (OEL TWA)	0,05 mg/m³ niebla
Remark	az (Al seleccionar un método adecuado de control de la exposición, deben tomarse en consideración posibles limitaciones e interferencias que pueden surgir en presencia de otros compuestos de azufre), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país), s (Esta sustancia tiene prohibida total o parcialmente su comercialización y uso como fitosanitario y/o como biocida. Para una información detallada acerca de las prohibiciones consúltese: Base de datos de productos biocidas: http://www.msssi.gob.es/ciudadanos/productos.do?tipo=plaguicidas Base de datos de productos fitosanitarios http://www.magrama.gob.es/agricultura/pags/fitos/registro/fichas/pdf/Lista_sa.pdf), d (Véase UNE EN 481: Atmósferas en los puestos de trabajo. Definición de las fracciones por el tamaño de las partículas para la medición de aerosoles).
United Kingdom - Occupational Exposure Limits	
Local name	Sulphuric acid
WEL TWA (OEL TWA)	0,05 mg/m³ mist
Remark	The mist is defined as the thoracic fraction

DNEL and PNEC

Sulfuric acid 98% AGR (7664-93-9)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	0,1 mg/m³
Long-term - local effects, inhalation	0,05 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	0,0025 mg/l
PNEC aqua (marine water)	0,00025 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0,002 mg/kg dwt
PNEC sediment (marine water)	0,002 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	8,8 mg/l

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:
Use a receptor hood for fumes/vapours. Do not inhale vapour.

Personal protection equipment

Personal protective equipment:
Avoid all unnecessary exposure. EN 374.
Personal protective equipment symbol(s):

Eye and face protection

Eye protection:
Safety glasses

Skin protection

Skin and body protection:
Wear suitable protective clothing

Skin and body protection	
Type	**Standard**
Protective clothing	

Hand protection:
Protective gloves against chemicals (EN 374)

Respiratory protection

Respiratory protection:
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour	:	Colourless.
Molecular mass	:	98,08 g/mol
Odour	:	Disagreeable.
Odour threshold	:	Not available
Melting point	:	-1,11 – 3 °C
Freezing point	:	Not available
Boiling point	:	310 °C
Flammability	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not available
Auto-ignition temperature	:	388 °C
Decomposition temperature	:	Not available
pH	:	< 0,3 (25˚C)
Viscosity, kinematic	:	Not available
Viscosity, dynamic	:	22,5 mPa·s
Solubility	:	Miscible.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	0,485 hPa Temp.: 20 °C
Vapour pressure at 50 °C	:	Not available
Density	:	Not available
Relative density	:	1,84
Relative vapour density at 20 °C	:	3,4
Particle characteristics	:	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Overheating. Water, humidity.

10.5. Incompatible materials

Metals.

10.6. Hazardous decomposition products

Toxic vapours are released.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

Sulfuric acid 98% AGR (7664-93-9)	
LD50 oral rat	2140 mg/kg bodyweight Animal: rat, 95% CL: 1540 - 2990
LC50 inhalation rat (mg/l)	0,375 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation : Causes severe skin burns.
pH: < 0,3 (25˚C)

Serious eye damage/irritation : Assumed to cause serious eye damage
pH: < 0,3 (25˚C)

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Sulfuric acid 98% AGR (7664-93-9)	
EC50 - Daphnia [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
NOEC (chronic)	0,15 mg/l Test organisms (species): other:Tanytarsus dissimilis
NOEC chronic fish	0,31 mg/l Test organisms (species): Salvelinus fontinalis

12.2. Persistence and degradability

Sulfuric acid 98% AGR (7664-93-9)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Must follow special treatment according to local regulation.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

UN-No. (ADR) : UN 1830
UN-No. (IMDG) : UN 1830
UN-No. (IATA) : UN 1830
UN-No. (ADN) : UN 1830
UN-No. (RID) : UN 1830

14.2. UN proper shipping name

Proper Shipping Name (ADR) : SULPHURIC ACID
Proper Shipping Name (IMDG) : SULPHURIC ACID
Proper Shipping Name (IATA) : Sulphuric acid
Proper Shipping Name (ADN) : SULPHURIC ACID
Proper Shipping Name (RID) : SULPHURIC ACID
Transport document description (ADR) (ADR) : UN 1830 SULPHURIC ACID, 8, II, (E)
Transport document description (IMDG) : UN 1830 SULPHURIC ACID, 8, II
Transport document description (IATA) : UN 1830 Sulphuric acid, 8, II
Transport document description (ADN) : UN 1830 SULPHURIC ACID, 8, II
Transport document description (RID) : UN 1830 SULPHURIC ACID, 8, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8
Danger labels (ADR) : 8
:

IMDG

Transport hazard class(es) (IMDG) : 8
Danger labels (IMDG) : 8
:

IATA

Transport hazard class(es) (IATA) : 8
Danger labels (IATA) : 8
:

ADN

Transport hazard class(es) (ADN) : 8
Danger labels (ADN) : 8

:

RID

Transport hazard class(es) (RID) : 8

Danger labels (RID) : 8

:

14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-B

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : C1

Limited quantities (ADR) : 1l

Excepted quantities (ADR) : E2

Packing instructions (ADR) : P001, IBC02

Mixed packing provisions (ADR) : MP15

Portable tank and bulk container instructions (ADR) : T8

Portable tank and bulk container special provisions (ADR) : TP2

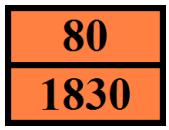
Tank code (ADR) : L4BN

Vehicle for tank carriage : AT

Transport category (ADR) : 2

Hazard identification number (Kemler No.) : 80

Orange plates :



Tunnel restriction code (ADR) : E

EAC code : 2P

Transport by sea

Limited quantities (IMDG) : 1 L

Excepted quantities (IMDG) : E2

Packing instructions (IMDG) : P001

IBC packing instructions (IMDG) : IBC02

IBC special provisions (IMDG) : B20

Tank instructions (IMDG) : T8

Tank special provisions (IMDG) : TP2

Stowage category (IMDG) : C

Stowage and handling (IMDG) : SW15

Segregation (IMDG) : SGG1A, SG36, SG49

Properties and observations (IMDG)	:	Colourless, oily liquid, mixture over 1.41 up to 1.84 relative density. In the presence of moisture, highly corrosive to most metals. Causes burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y840
PCA limited quantity max net quantity (IATA)	:	0.5L
PCA packing instructions (IATA)	:	851
PCA max net quantity (IATA)	:	1L
CAO packing instructions (IATA)	:	855
CAO max net quantity (IATA)	:	30L
ERG code (IATA)	:	8L

Inland waterway transport

Classification code (ADN)	:	C1
Limited quantities (ADN)	:	1 L
Excepted quantities (ADN)	:	E2
Carriage permitted (ADN)	:	T
Equipment required (ADN)	:	PP, EP
Number of blue cones/lights (ADN)	:	0

Rail transport

Classification code (RID)	:	C1
Limited quantities (RID)	:	1L
Excepted quantities (RID)	:	E2
Packing instructions (RID)	:	P001, IBC02
Mixed packing provisions (RID)	:	MP15
Portable tank and bulk container instructions (RID)	:	T8
Portable tank and bulk container special provisions (RID)	:	TP2
Tank codes for RID tanks (RID)	:	L4BN
Special provisions for RID tanks (RID)	:	TU42
Transport category (RID)	:	2
Colis express (express parcels) (RID)	:	CE6
Hazard identification number (RID)	:	80

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	**Applicable on**
3.	Sulfuric acid 98% AGR
3(b)	Sulfuric acid 98% AGR

REACH Annex XIV (Authorisation List)

Sulfuric acid 98% AGR is not on the REACH Annex XIV List

REACH Candidate List (SVHC)

Sulfuric acid 98% AGR is not on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

{0} is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 july 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

{0} is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Dual-Use Regulation (428/2009)

Not listed on the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Not listed on the Explosives Precursors list (EU)

Drug Precursors Regulation (273/2004)

Not listed on the Drug Precursors list (EU)

National regulations

Germany

Water hazard class (WGK)	:	WGK 3, Highly hazardous to water (Classification according to AwSV).

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	Sulfuric acid is listed
SZW-lijst van mutagene stoffen	:	The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	:	The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	:	The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	:	The substance is not listed

Denmark

Danish National Regulations	:	Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.