

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

1.1. Product identifier

Product form	: Mixture
Name	: Sulfuric acid, volumetric solutions
Trade name	: Sulfuric acid, volumetric solution 0.5 M (1.0 N)
UFI	: M6D0-S0A2-E005-R5W2
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-1V0
Formula	: H ₂ SO ₄

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

Relevant identified uses

Main use category	: Laboratory use
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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.
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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]

Corrosive to metals, Category 1 H290
Full text of H and EUH statements: see section 16

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)



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Signal word (CLP)	: Warning
Hazard statements (CLP)	: H290 - May be corrosive to metals.
Precautionary statements (CLP)	: P390 - Absorb spillage to prevent material damage. P406 - Store in corrosive resistant container with a resistant inner liner.

2.3. Other hazards

PBT: not relevant – no registration required

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties 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

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Sulfuric acid 95-98 %	CAS-No.: 7664-93-9 EC-No.: 231-639-5 EC Index-No.: 016-020-00-8 REACH-no: 01-2119458838-20	3 – 5	Skin Corr. 1A, H314

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Sulfuric acid 95-98 %	CAS-No.: 7664-93-9 EC-No.: 231-639-5 EC Index-No.: 016-020-00-8 REACH-no: 01-2119458838-20	($5 \leq C < 15$) Eye Irrit. 2; H319 ($5 \leq C < 15$) Skin Irrit. 2; H315 ($15 \leq C < 100$) Skin Corr. 1A; H314

Full text of H and EUH statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Get medical advice/attention if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.
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	: Do not induce vomiting. Drink plenty of water. Call a physician immediately.

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

No additional information available

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

Never give anything by mouth to an unconscious person.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Sand. Carbon dioxide. Foam. Dry 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.

For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Do not attempt to take action without suitable protective equipment.

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.

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.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Sulfuric acid, volumetric solution 0.5 M (1.0 N) (7664-93-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Sulphuric acid (mist)
IOEL TWA	0,05 mg/m ³
France - Occupational Exposure Limits	
Local name	Acide sulfurique
VME (OEL TWA)	0,05 mg/m ³ (fraction thoracique)
VLE (OEL Ceiling/STEL)	3 mg/m ³ (fraction thoracique)
Remark	VME réglementaire indicative; VLE recommandée/admise
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Schwefelsäure
AGW (OEL TWA)	0,1 mg/m ³ E (mg/m ³)
Remark	DFG, EU, Y
Italy - Occupational Exposure Limits	
Local name	Acido solforico (nebulizzazione)
OEL TWA	0,05 mg/m ³
Portugal - Occupational Exposure Limits	
Local name	Ácido sulfúrico
OEL TWA	0,2 mg/m ³ T (Fração torácica)
Spain - Occupational Exposure Limits	
Local name	Ácido sulfúrico
VLA-ED (OEL TWA)	0,05 mg/m ³ 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/m ³ mist
Remark	The mist is defined as the thoracic fraction

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DNEL and PNEC

Sulfuric acid, volumetric solution 0.5 M (1.0 N) (7664-93-9)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	100 mg/m ³
Acute - local effects, inhalation	50 mg/m ³

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

Eye protection			
Type	Field of application	Characteristics	Standard
			EN 166

Skin protection

Skin and body protection:

Wear suitable protective clothing

Skin and body protection	
Type	Standard

Hand protection:

Nitrile rubber (NBR) /

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
	Nitrile rubber (NBR)	6 (> 480 minutes)	0.2		EN 374-2, EN 374-3, EN 388

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: odourless.
Odour threshold	: Not available
Melting point	: Not available

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Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20 °C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

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

No additional information available

10.5. Incompatible materials

Strong acids. Strong bases. Strong reducing agents. Oxidizing agent.

10.6. Hazardous decomposition products

No additional information available

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
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
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

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Aspiration hazard : Not classified

11.2. Information on other hazards

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : Not applicable

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

12.2. Persistence and degradability

Sulfuric acid, volumetric solution 0.5 M (1.0 N) (7664-93-9)

Persistence and degradability	Rapidly degradable
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Sulfuric acid 95-98 % (7664-93-9)

Persistence and degradability	Rapidly degradable
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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

Sulfuric acid, volumetric solution 0.5 M (1.0 N) (7664-93-9)

PBT: not relevant – no registration required

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : Not applicable.

12.7. Other adverse effects

Other adverse effects : Do not discharge into drains or rivers.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Must follow special treatment according to local regulation.
HP Code : HP4 - "Irritant — skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.

SECTION 14: Transport information

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

14.1. UN number or ID number

UN-No. (ADR) : UN 3264

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UN-No. (IMDG)	: UN 3264
UN-No. (IATA)	: UN 3264
UN-No. (ADN)	: UN 3264
UN-No. (RID)	: UN 3264

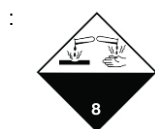
14.2. UN proper shipping name

Proper Shipping Name (ADR)	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Proper Shipping Name (IMDG)	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Proper Shipping Name (IATA)	: Corrosive liquid, acidic, inorganic, n.o.s.
Proper Shipping Name (ADN)	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Proper Shipping Name (RID)	: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Transport document description (ADR) (ADR)	: UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulfuric acid, volumetric solutions), 8, III, (E)
Transport document description (IMDG)	: UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulfuric acid, volumetric solutions), 8, III
Transport document description (IATA)	: UN 3264 Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid, volumetric solutions), 8, III
Transport document description (ADN)	: UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulfuric acid, volumetric solutions), 8, III
Transport document description (RID)	: UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulfuric acid, volumetric solutions), 8, III

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

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14.4. Packing group

Packing group (ADR)	: III
Packing group (IMDG)	: III
Packing group (IATA)	: III
Packing group (ADN)	: III
Packing group (RID)	: III

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
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP1, TP28
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Hazard identification number (Kemler No.)	: 80
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 2X
APP code	: B

Transport by sea

Special provisions (IMDG)	: 223, 274
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1, TP28
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW2
Segregation (IMDG)	: SGG1, SG36, SG49
Properties and observations (IMDG)	: Causes burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L

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PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L

Inland waterway transport

Classification code (ADN)	: C1
Special provisions (ADN)	: 274
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: C1
Special provisions (RID)	: 274
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP1, TP28
Tank codes for RID tanks (RID)	: L4BN
Special provisions for RID tanks (RID)	: TU42
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Colis express (express parcels) (RID)	: CE8
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, volumetric solution 0.5 M (1.0 N)
3(b)	Sulfuric acid, volumetric solution 0.5 M (1.0 N)

REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

REACH Candidate List (SVHC)

Contains no substance on the REACH candidate list

PIC Regulation (Prior Informed Consent)

Contains no substance 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.

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POP Regulation (Persistent Organic Pollutants)

Contains no substance 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)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Dual-Use Regulation (428/2009)

Contains no substance subject to 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)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

National regulations

Germany

VOC ordinance (ChemVOCFarbV) :

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : Sulfuric acid 95-98 % is listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are 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
H290	May be corrosive to metals.
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.