

SAFETY DATA SHEET

According to regulations (CE) No. 1907/2006 and 2015/830



Revision date : 01/09/2016

Version 16.2

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

1.1 Product identifier

Catalogue No **941**
Product name **Sulfuric acid 1/3**
REACH Registration Number This product is a mixture. REACH Registration Number see section 3.

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

Identified uses Reagent for analysis

1.3 Details of the supplier of the safety data sheet

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courriel : info@dujardin-salleron.com - site : www.dujardin-salleron.com

1.4 Emergency telephone number France : INRS : +33 (0)1 45 42 59 59

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (Regulation (CE) N° 1272/2008)

Skin corrosion, Category 1A, H314

Corrosive to metals, Category 1, H290

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

2.2 Label elements

Labeling (Regulation (CE) N° 1272/2008)

Hazard pictograms



Signal word

Danger

Hazard statements

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

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.

P309 + P310: IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

2.2.3 Other hazards

None known.

SECTION 3. Composition/informations on ingredients

Chemical nature: Aqueous solution

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical Name (Concentration):

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Sulphuric acid (≥ 30 - < 32%)

CAS N°	EC N°	REACH N°	Classification
7664-93-9	231-639-5	01-2119457892-27-XXXX	Skin corrosion, Category 1A, H314 Corrosive to metals, Category 1, H290

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

After inhalation: fresh air. Call in physician

After skin contact: wash off with plenty of water or with a neutralizing agent such as Diphoterine ® (PREVOR). Immediately remove contaminated clothing. Call a physician.

After eye contact: rinse out with plenty of water or a neutralizing agent such as Diphoterine ® (PREVOR). Immediately call in ophthalmologist.

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralize.

4.2 Most important symptoms and effects, both acute and delayed

Irritation and corrosion, serious damage of the eye (risk of blindness!), cough, shortness of breath, nausea, vomiting, diarrhea, pain.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Not combustible.

Ability to liberate hazardous vapors (SO₂ release) in case of fire nearby

Hydrogen may form upon contact with metals (danger of explosion!)

5.3 Advice for firefighters

Special protective equipment for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Cool closed containers exposed to fire with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system. Suppress (knock down) gases/vapors/mists with a water spray jet.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Do not breathe vapors, aerosols. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

6.2 Environmental precautions

Do not empty into drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent and neutralizing material (e.g. Trivorex ® (PREVOR)). Dispose of properly.

Clean up affected area.

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6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling Advice on safe handling

Observe label precautions.

Hygiene measures

Take off immediately all contaminated clothing. Preventive skin protection is recommended.

Wash hands and face after working with mixture.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: no aluminum, tin or zinc containers.

Storage temperature: +15°C to +25°C.

Keep container in a cool, well ventilated place.

7.3 Specific end use(s)

See exposure scenario in the Annex to this SDS.

SECTION 8. Exposure controls / personal protection

8.1 Control parameters

Components with occupational exposure limit values

Sulphuric acid (7664-93-9)

Base	Value	Threshold limit values	Comment
Limit value for occupational exposure (VLEP France)	Short-term exposure limit value	3 mg/m ³	Indicative limit values
	Long-term exposure limit value	1 mg/ m ³	Indicative limit values

Derived No Effect Level (DNEL)

Worker DNEL, acute	Local effects	inhalation	0.1 mg/m ³
Worker DNEL, long term	Local effects	inhalation	0.05 mg/m ³

Recommended control procedures

Measuring methods of workplace atmosphere must meet DIN EN 482 and DIN EN 689 standards.

Predicted No Effect Concentrations (PNECs)

Sulphuric acid (7664-93-9)

Fresh water	Fresh water sediment	Marine water	Marine sediment	Sewage treatment plant
0.0025 mg/l	0.002 mg/kg	0.00025 mg/l	0.002 mg/kg	8.8 mg/l

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Wear acid-resistant protective clothing, labelled with CE marking.

Eye/face protection

Tightly fitting safety goggles

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Hand protection

full contact:	Glove material:	Nitrile rubber
	Glove thickness:	0.38 mm
	Break through time:	> 480 min
Splash contact:	Glove material:	Nitrile rubber
	Glove thickness:	0.11 mm
	Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.

Other protective equipment

Wear acid-resistant protective clothing, labelled with CE marking.

Respiratory protection

Required when vapors/aerosols are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substance. The company has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented

Environmental exposure controls

Do not empty into drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid.
Color	colorless.
Odor	odorless.
Odor Threshold	No information available.
pH	< 1 at 20 °C
Melting point	No information available.
Boiling point/boiling range	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	not applicable
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapor pressure	No information available.
Relative vapor density	No information available.
Relative density	ca.1,18 g/cm ³ at 20°C
Water solubility	at 20°C soluble (development of heat)
Partition coefficient: n- octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	Oxidizing potential

9.2 Other data

Bulk density	no information available.
Refraction index	no information available.
Dissociation constant	no information available.

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Surface tension	no information available.
Henry constant	no information available.
Corrosion	May be corrosive to metals.

SECTION 10. Stability and reactivity

10.1 Reactivity

Corrosive effect
Oxidizing agent

10.2 Chemical stability

The product is chemically stable for up to 2 years under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Violent reactions possible with a risk of explosion and/or of toxic gas formation with the following substances: water, alkali metals, alkali compounds, ammonia, aldehydes, acetonitrile, alkaline earth metals, metals, metal alloys, oxides of phosphorus, phosphorus, hydrides, halogen-halogen compounds, oxyhalogenic compounds, permanganates, nitrates, carbides, combustible substances, organic solvent, acetylidene, nitriles, organic nitro compounds, anilines, peroxides, picrates, nitrides, lithium silicide, iron(III) compounds, bromates, chlorates, amines, perchlorates, hydrogen peroxide.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Animal/vegetable tissues, Metals
Contact with metals liberates hydrogen gas

10.6 Hazardous decomposition products

Products in the event of fire: See section 5.

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Mixture

Acute oral toxicity

After swallowing, the mixture causes serious burns to mouth, throat, esophagus and stomach (risk of perforation!).

Acute inhalation toxicity

The mixture causes cause irritation of the mucous membranes in the respiratory tract.

Acute dermal toxicity

No information available.

Skin irritation

Causes severe burns to skin.

Eye irritation

The mixture causes serious eye damage (risk of blindness!)

Sensitization

No information available.

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

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

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

Teratogenicity

No information available.

Aspiration hazards

No information available.

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Substance

Sulphuric acid (7664-93-9)

Acute oral toxicity

LD50 rat: 2140 mg/kg

Acute inhalation toxicity

LC50 rat: 210 mg/kg; 2 h (IUCLID)

Symptoms: cough, laryngitis, shortness of breath, spasm, inflammation and edema of the larynx and bronchi.

Corrosive and irritant effect

Product is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin

Sensitization

Not known to have a sensitizing effect

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction) No information available.

Further data:

Handle in accordance with good industrial hygiene and safety practice

SECTION 12. Ecological information

Mixture / substance

12.1 Toxicity

Toxicity for fish

EC50 *Lepomis macrochirus* (bluegill): 16-29 mg/l; 96 h (substance)

Toxicity to daphnia and other aquatic invertebrates

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

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

This mixture / substance contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Forms corrosive mixtures with water even if diluted.

Harmful effect due to pH shift.

Hazardous for drinking water in case of penetration in the soil of large quantities.

Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

Waste treatment methods

Waste must be disposed of in accordance with the Directive on waste 2008/98/EC and with local and national regulations. Leave chemicals in original containers. No mixing with other waste. Treat uncleaned containers like the product itself.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number	UN 2796
14.2 Proper shipping name	SULPHURIC ACID
14.3 Class	8
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for users	yes
Tunnel restriction code	E

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

14.1 UN number	UN 2796
14.2 Proper shipping name	SULPHURIC ACID

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14.3 Class 8
14.4 Packing group II
14.5 Environmentally hazardous --
14.6 Special precautions for users yes

Sea transport (IMDG)

14.1 UN number UN 2796
14.2 Proper shipping name SULPHURIC ACID
14.3 Class 8
14.4 Packing group II
14.5 Environmentally hazardous --
14.6 Special precautions for users yes
EMS F-A S-B
14 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

SECTION 15. Regulatory information

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

Aquatic Class risk (WGK) WGK1 (slightly hazardous for water).
Occupational restrictions Take note of Directive 94/33/EC on the protection of young people at work and Directive 92/85/EEC on the safety and health at work of pregnant women
Substances of very high concern (SVHC) This product does not contain substances of very high concern above the respective regulatory limit (> 0.1% (w/w) Regulation (EC) N° 1907/2006 (REACH), Article 57

15.2 Chemical Safety Assessment

See exposure scenario in annex.

SECTION 16. Other informations

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

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Training advice

Provide adequate information, instruction and training for operators.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.

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ANNEX: Extract of the exposure scenario (ES n°2) of workers and environment for professional use of substance sulfuric acid in accordance with REACH regulation (EC) No 1907/2006

1. Professional use (Reagent for analysis)

Sectors of end-use

SU 22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Chemical product category

PC21 Laboratory chemicals

Process categories

PROC15 Use as laboratory reagent

Environmental Release Categories

ERC2 Formulation of preparations

ERC6a Industrial use resulting in manufacture of another substance (use of intermediates)

ERC6b Industrial use of reactive processing aids

2 Contributing scenarios: Operational conditions and risk management measures

2.1 Contributing scenario controlling environmental exposure for: ERC2

Amount used

Annual amount per site 300000 t

Environment factors not influenced by risk management

Dilution Factor (River) 10

Other given operational conditions affecting environmental exposure

Continuous use/release

Number of emission days per year 365

Technical conditions and measures / Organizational measures

Air Use of air emission abatement equipments.

Water Solutions with low pH-value must be neutralized before discharge.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant Municipal sewage treatment plant

Flow rate of sewage treatment plant effluent 2.000 m3/d

Sludge Treatment

Sewage sludge should not be applied to natural soils.

2.2 Contributing scenario controlling environmental exposure for: ERC6a

Amount used

Annual amount per site 300000 t

Environment factors not influenced by risk management

Dilution Factor (River) 10

Other given operational conditions affecting environmental exposure

Continuous use/release

Number of emission days per year 365

Technical conditions and measures / Organizational measures

Air Use of air emission abatement equipments.

Water Solutions with low pH-value must be neutralized before discharge.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant Municipal sewage treatment plant

Flow rate of sewage treatment plant effluent 2.000 m3/d

Sludge Treatment

Sewage sludge should not be applied to natural soils.

2.3 Contributing scenario controlling environmental exposure for: ERC6b

Amount used

Annual amount per site 100000 t

Environment factors not influenced by risk management

Dilution Factor (River) 10

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Other given operational conditions affecting environmental exposure

Continuous use/release

Number of emission days per year 365

Technical conditions and measures / Organizational measures

Air Use of air emission abatement equipments.

Water Solutions with low pH-value must be neutralized before discharge.

Conditions and measures related to municipal sewage treatment plant

Type of Sewage Treatment Plant Municipal sewage treatment plant

Flow rate of sewage treatment plant effluent 2.000 m3/d

Sludge Treatment

Sewage sludge should not be applied to natural soils.

2.3 Contributing scenario controlling worker exposure for: PROC15

Product characteristics

Concentration of the Substance in Mixture/Article Covers the percentage of the substance in the product up to 100 %

Physical Form (at time of use) Low volatile liquid

Process Temperature < 130 °C

Frequency and duration of use

Frequency of use < 4 hours/day

Other operational conditions affecting workers exposure

Outdoor / Indoor Indoor with local exhaust ventilation (LEV)

Organisational measures to prevent /limit releases, dispersion and exposure

Avoid carrying out operation for more than 4 hours.

Conditions and measures related to personal protection, hygiene and health evaluation

Wear suitable gloves tested to EN374.

3. Exposure estimation and reference to its source Environment

CS	Use descriptor	Msafe	Compartment	RCR	Exposure Assessment Method
2.1	ERC2		All compartments	< 1	EUSES
2.2	ERC6a		All compartments	< 1	EUSES
2.3	ERC6b		All compartments	< 1	EUSES

Workers

CS	Use descriptor	Exposure duration, route, effect	RCR	Exposure Assessment Method
2.4	PROC15	acute, inhalative, local	0,82	ECETOC TRA
		long term, inhalative, local	0,98	ECETOC TRA

For (other) local effects risk management measures are based on qualitative risk characterisation.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system; ECHA Guidance for downstream users; ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterization and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).