

## SAFETY DATA SHEET

**Acinor****Sulphuric acid 15-51%****Acinor**

The safety data sheet is in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued	09.06.2016
Revision date	13.07.2021

### 1.1. Product identifier

Product name	Sulphuric acid 15-51%
Synonyms	Svovelsyre
REACH Reg. No.	01-2119458838-20
CAS No.	7664-93-9
EC No.	231-639-5
Index No.	016-020-00-8
Formula	H2SO4

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

Use of the substance / preparation	pH-regulating. Process chemical. Surface treatment av metals. For professional use only
Relevant identified uses	SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites SU8 Manufacture of bulk, large scale chemicals (including petroleum products) SU9 Manufacture of fine chemicals PC20 Products such as pH-regulators, flocculants, precipitants, neutralization agents, other other unspecified PROC1 Use in closed process, no likelihood of exposure PROC2 Use in closed, continuous process with occasional controlled exposure PROC3 Use in closed batch process (synthesis or formulation) PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at nondedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC13 Treatment of articles by dipping and pouring

	ERC6B Industrial use of reactive processing aids
Consumer use	No
Use of chemical, comments	Refer to exposure scenario(s) attached.

### 1.3. Details of the supplier of the safety data sheet

#### Distributor

Company name	Acinor AS
Office address	Titangt. 13, NO-1630 Gamle Fredrikstad
Postal address	Titangaten 13
Postcode	1630
City	Gamle Fredrikstad
Country	Norway
Telephone number	69384082
Fax	69384084
Email	<a href="mailto:post@acinor.no">post@acinor.no</a>
Website	<a href="http://www.acinor.no">www.acinor.no</a>
Enterprise No.	NO 984 648 324 MVA

### 1.4. Emergency telephone number

Emergency telephone	Telephone number: +47 22 59 13 00 Description: Norwegian Poison Information Center
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## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Skin Corr. 1A; H314 Eye Dam. 1; H318
Substance / mixture hazardous properties	Causes severe burns and eye damage.

### 2.2. Label elements

#### Hazard pictograms (CLP)



Composition on the label	Sulphuric acid ...%
Signal word	Danger
Hazard statements	H314 Causes severe skin burns and eye damage.
Precautionary statements	P260 Do not breathe dust / fume / gas / mist / vapours / spray. 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.  
 P310 Immediately call a POISON CENTER or doctor / physician.

## 2.3. Other hazards

PBT / vPvB	The chemical contains no PBT or vPvB substances.
Health effect	CAS:7664-93-9 is not classified as carcinogenic, but is marked as carcinogenic in the Norwegian working exposure limit list.
Other hazards	None of the components are listed on ECHAs Endocrine disruptor assessment list.

## SECTION 3: Composition / information on ingredients

### 3.1. Substances

Substance	Identification	Classification	Contents	Notes
Sulphuric acid ...%	CAS No.: 7664-93-9 EC No.: 231-639-5 Index No.: 016-020-00-8 REACH Reg. No.: 01-2119458838-20	Skin Corr. 1A; H314;	15 – 51 %	
Substance comments	See section 16 for explanation of hazard statements (H) listed above.			

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

General	Emergency telephone number: see section 1.4. In case of unconsciousness or severe accidents, call 112.
Inhalation	Rinse nose and mouth with water. Fresh air and rest. Consult a physician. When breathing is difficult, properly trained personnel may assist affected person by administering 100% oxygen. Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Immediately call an ambulance.
Skin contact	Rinse immediately with plenty of water. Remove contaminated clothing. Get medical attention immediately! Chemical burns must be treated by a physician.
Eye contact	Promptly rinse eyes with plenty of water (tempered at 20-30°C) for at least 30 minutes. Remove contact lenses and open eyes wide apart. Transport to physician. Keep on flushing during transport.
Ingestion	Rinse mouth with water. Drink plenty of water. Liquid can also be given as milk or cream. Never give liquid to an unconscious person. Do not induce vomiting. Get medical attention immediately! Transport to hospital. Bring the safety data sheet.

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

General symptoms and effects	Treat as chemical burns/scalding. Risk of perforation of the esophagus. Hospital treatment is required.
Acute symptoms and effects	Inhalation of vapors may cause severe irritation or burns in the respiratory tract. The chemical is corrosive to the eyes and may cause permanent damage. Symptoms such as strong burning, tearing/watering, redness and blurred vision may occur. In severe cases, there is a risk of visual damage/blindness. Burning pain and severe corrosive skin damage. Forms blisters and can cause ulceration. Causes burns if swallowed. Causes burning sensation in the mouth, throat and esophagus. May cause serious permanent damage. Risk of perforation of the stomach if there has been swallowed large amounts.

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

Other information	Treat symptomatically. Symptoms can be delayed. No specific information from the manufacturer.
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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	Dry-powder, carbon dioxide (CO <sub>2</sub> ), water mist, alcohol resistant foam.
Improper extinguishing media	Do not use water jet.

#### 5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	The chemical is not classified as flammable.
Hazardous combustion products	May include, but is not limited to: Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide (CO). Oxides of sulphur (SO <sub>x</sub> ).

#### 5.3. Advice for firefighters

Personal protective equipment	Use compressed air equipment when the chemical is involved in fire. In case of evacuation, an approved protection mask should be used. See also section 8.
Other information	Containers close to fire should be removed immediately or cooled with water. Spill water from fire fighting may be strongly caustic.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures	Beware! The product is corrosive. Avoid inhalation of vapours and contact with skin and eyes. Use protective equipment as referred to in section 8. Ensure adequate ventilation.
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#### 6.2. Environmental precautions

Environmental precautionary measures	Do not allow to enter into sewer, water system or soil.
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#### 6.3. Methods and material for containment and cleaning up

**Clean up**

Absorb in vermiculite, dry sand or earth and place into containers. Collect in a suitable container and dispose as hazardous waste according to section 13. Neutralise small amounts with sodium bicarbonate or lime and flush to sewer with large amounts of water.

**6.4. Reference to other sections****Other instructions**

See also sections 8 and 13.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Handling**

Provide adequate ventilation. Beware! The product is corrosive. Use protective equipment as referred to in section 8. Avoid inhalation. Avoid contact with skin and eyes. Arrange working conditions to avoid direct contact. When diluting acid, should acid always be added carefully to the water, NEVER water to the acid.

**Protective safety measures****Comments**

The chemical is corrosive.  
Diluting or dissolving in water causes rapid heating.

**Advice on general occupational hygiene**

Wash hands at the end of each work shift and before eating, smoking and using the toilet. Do not eat, drink or smoke during work. Wash contaminated clothing before reuse.

**7.2. Conditions for safe storage, including any incompatibilities****Storage**

Store in a tightly closed container in a dry place. Protect from sunlight. Store in a well-ventilated place.

**Conditions to avoid**

Do not store near heat sources or expose to high temperatures. Moisture.

**Conditions for safe storage****Advice on storage compatibility**

Keep away from: Water/moisture. Metals. Strong reducing agents. Organic material. Alkalies.

**7.3. Specific end use(s)****Specific use(s)**

See section 1.2. See exposure scenario.

**SECTION 8: Exposure controls / personal protection****8.1. Control parameters**

Substance	Identification	Exposure limits	TWA Year
Svovelsyre aerosol, torakal fraksjon	CAS No.: 7664-93-9	Limit value (8 h) : 0,1 mg/m <sup>3</sup> <b>Exposure limit letter</b> Letter code: K	
Control parameters comments	Explanation of the notations: K = Chemicals to be treated as carcinogenic. References (laws/regulations): Norwegian regulation on exposure limits:		

"FOR-2011-12-06-1358 Forskrift om tiltaksverdier og grenseverdier for fysiske og kjemiske faktorer i arbeidsmiljøet samt smitterisikogrupper for biologiske faktorer (forskrift om tiltaks- og grenseverdier)".

## DNEL / PNEC

### DNEL

Group: Professional  
Route of exposure: Langsiktig (gjentatt) – Innånding – Lokal effekt  
Value: 0,04 mg/m<sup>3</sup>

### PNEC

Route of exposure: Freshwater  
Value: 0,0025 mg/l

Route of exposure: Saltwater  
Value: 0,00025 mg/l

Route of exposure: Sewage treatment plant STP  
Value: 18 mg/l

## 8.2. Exposure controls

### Precautionary measures to prevent exposure

#### Technical measures to prevent exposure

Provide adequate general and local exhaust ventilation. The personal protective equipment must be CE-marked and the latest version of the standards shall be used. The protective equipment and the specified standards recommended below are only suggestions, and should be selected on advice from the supplier of such equipment.

A risk assessment of the work place/work activities (the actual risk) may lead to other control measures. The protection equipment's suitability and durability will depend on application.

### Eye / face protection

#### Eye protection equipment

Description: Wear tight-fitting goggles or face shield.  
Reference to relevant standard: EN 166 (Personal eye-protection. Specifications).

#### Additional eye protection measures

Eye wash facilities should be available at the work place. Either a fixed eye wash facility connected to the drinking water (preferably warm water) or a portable disposable unit.

### Hand protection

#### Suitable materials

Butyl. Viton rubber (fluor rubber).

#### Unsuitable materials

Rubber (natural, latex). Nitrile. Chloroprene rubber. Leather.

#### Breakthrough time

Comments: Butyl: 2 timer.  
Vitongummi: ≥ 8 timer.

#### Thickness of glove material

Comments: Butyl: 0,5 mm.  
Vitongummi: 0,4 mm.

#### Hand protection equipment

Description: Use suitable protective gloves if risk of skin contact. The gloves abilities may vary among the different glove manufacturers.  
Reference to relevant standard: EN ISO 374 (Protective gloves against chemicals and micro-organisms). EN 420 (Protective gloves – General requirements and

	test methods).
Additional hand protection measures	Change gloves frequently.

## Skin protection

Recommended protective clothing	Description: Wear appropriate protective clothing to protect against possible skin contact.
Additional skin protection measures	Emergency shower should be available at the workplace.

## Respiratory protection

Recommended respiratory protection	Description: In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment with combination filter (type E/P2). Reference to relevant standard: EN 14387 (Respiratory protective devices. Gas filter(s) and combined filter(s). Requirements, testing, marking). EN 143 (Respiratory protective devices – Particle filters – Requirements, testing, marking).
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## Appropriate environmental exposure control

Environmental exposure controls	Do not allow to enter into sewer, water system or soil.
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# SECTION 9: Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Colourless.
Odour	Odorless.
Odour limit	Comments: Not relevant.
pH	Status: In delivery state Value: < 0,3 Comments: 10% løsnng.
Melting point / melting range	Value: 29,44 °C Comments: 96%
Freezing point	Value: -32 °C Comments: 96%
Boiling point / boiling range	Comments: Not determined.
Flash point	Comments: Not determined.
Evaporation rate	Comments: Not determined.
Flammability	Not relevant.
Explosion limit	Comments: Not relevant.
Vapour pressure	Value: 0,000008 kPa Comments: 96%
Vapour density	Comments: Not determined.

Relative density	Comments: 20%: 1,14 30%: 1,22 37%: 1,28 40%: 1,30 50%: 1,40
Solubility	Medium: Water Comments: Soluble.
Partition coefficient: n-octanol/ water	Comments: Not determined.
Auto-ignition temperature	Comments: Not determined.
Decomposition temperature	Comments: Not determined.
Viscosity	Value: 22,5 cP Comments: Dynamic. 96%
Explosive properties	Not explosive.
Oxidising properties	Not oxidizing.

## 9.2. Other information

### Other physical and chemical properties

Physical and chemical properties	Molecular weight : 98,08 g/mol.
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity	Reactive with the materials listed in Section 10.5.
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### 10.2. Chemical stability

Stability	Stable under normal temperature conditions and recommended use.
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### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Dangerous polymerisation will not occur. Generates heat on contact with water. Arise in contact with inappropriate conditions and incompatible materials (sections 10.4 and 10.5)
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### 10.4. Conditions to avoid

Conditions to avoid	High temperature. Moisture.
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### 10.5. Incompatible materials

Materials to avoid	Water/moisture. Strong reducing agents. Metals. Alkalies.
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### 10.6. Hazardous decomposition products

Hazardous decomposition products	None under normal conditions. See also section 5.2.
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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	Type of toxicity: Acute Effect tested: LD50 Route of exposure: Oral Value: = 2140 mg/kg Species: Rotte Comments: 96%
	Type of toxicity: Acute Effect tested: LC50 Route of exposure: Inhalation. Duration: 2 h Value: = 510 mg/kg Species: Rotte Comments: 96%

### Other information regarding health hazards

Assessment of acute toxicity, classification	Based on available data, the classification criteria are not met.
Assessment of skin corrosion / irritation, classification	Causes severe burns to the skin.
Assessment of eye damage or irritation, classification	Causes serious eye damage.
Assessment of respiratory sensitisation, classification	Based on available data, the classification criteria are not met.
Assessment of skin sensitisation, classification	Based on available data, the classification criteria are not met.
Mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity, other information	Based on available data, the classification criteria are not met. The chemical CAS:7664-93-9 is not classified as carcinogenic, but is marked as carcinogenic in the Norwegian working exposure limit list.
Reproductive toxicity	Based on available data, the classification criteria are not met.
Assessment of specific target organ toxicity - single exposure, classification	Based on available data, the classification criteria are not met.
Assessment of specific target organ toxicity - repeated exposure, classification	Based on available data the classification criteria are not met.
Assessment of aspiration hazard, classification	Based on available data, the classification criteria are not met.

### Symptoms of exposure

In case of ingestion	May cause burns in mucous membranes, throat, oesophagus and stomach. Risk of perforation of the stomach if there has been swallowed large amounts.
In case of skin contact	Burning pain and severe corrosive skin damage. Forms blisters and can cause ulceration.

In case of inhalation	Vapours irritate the respiratory system, and may cause coughing and difficulties in breathing. Vapours are corrosive. After 24-36 hours, injured persons may develop serious shortness of breath and lung oedema. High concentrations may cause severe lung damage.
In case of eye contact	The chemical is corrosive to the eyes and may cause permanent damage. Symptoms such as strong burning, tearing/watering, redness and blurred vision may occur. In severe cases, there is a risk of visual damage/blindness.

## 11.2 Other information

Other information	None of the components are listed on ECHAs Endocrine disruptor assessment list.
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## SECTION 12: Ecological information

### 12.1. Toxicity

Aquatic toxicity, fish	Value: 500 mg/l Test duration: 96 h Species: Brachydanio rerio Method: LC50 (statisk) Test reference: 96%
Aquatic toxicity, crustacean	Value: 29 mg/l Test duration: 24 h Species: Daphnia magna Method: EC50 Test reference: 96%
Ecotoxicity	The chemical is not classified as harmful to the environment.

### 12.2. Persistence and degradability

Persistence and degradability description/evaluation	Contains only inorganic compounds. The product is not biodegradable.
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### 12.3. Bioaccumulative potential

Bioaccumulation, comments	The chemical is not expected to be bioaccumulative.
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### 12.4. Mobility in soil

Mobility	Soluble in water. May be dispersed in soil and groundwater.
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### 12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	The chemical contains no PBT or vPvB substances.
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### 12.6. Endocrine disrupting properties

Endocrine disrupting properties	None of the components are listed on ECHAs Endocrine disruptor assessment list.
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### 12.7. Other adverse effects

Additional ecological information	Do not allow to enter into sewer, water system or soil. Large spills can negatively impact the aquatic environment locally due to an decrease in the pH-value.
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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Appropriate methods of disposal for the chemical	Disposed of as hazardous waste by approved contractor. The waste code (EWC-Code) is intended as a guide. The code must be chosen by the user, if the use differs from the one mentioned below.
EWC waste code	EWC waste code: 060101 sulphuric acid and sulphurous acid Classified as hazardous waste: Yes
NORSAS	7131 Inorganic peroxides.
Other information	Do not empty into drains.

## SECTION 14: Transport information

Dangerous goods	Yes
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### 14.1. UN number

ADR/RID/ADN	2796
IMDG	2796
ICAO/IATA	2796

### 14.2. UN proper shipping name

Proper shipping name English ADR/RID/ADN	SULPHURIC ACID
ADR/RID/ADN	SULPHURIC ACID
IMDG	SULPHURIC ACID
ICAO/IATA	SULPHURIC ACID

### 14.3. Transport hazard class(es)

ADR/RID/ADN	8
Classification code ADR/RID/ADN	C1
IMDG	8
ICAO/IATA	8

### 14.4. Packing group

ADR/RID/ADN	II
IMDG	II
ICAO/IATA	II

### 14.5. Environmental hazards

IMDG Marine pollutant	No
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## 14.6. Special precautions for user

Special safety precautions for user	Not relevant.
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## 14.7. Maritime transport in bulk according to IMO instruments

Product name	SULPHURIC ACID
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### Additional information

Hazard label ADR/RID/ADN	8
Hazard label IMDG	8
Hazard label ICAO/IATA	8

### ADR/RID Other information

Tunnel restriction code	E
Transport category	2
Hazard No.	80

### IMDG Other information

EmS	F-A, S-B
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## SECTION 15: Regulatory information

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


References (laws/regulations)	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP-regulation) with later amendments. Regulation (EC) No 1907/2006 on the registration, evaluation, authorization and restriction of chemicals (REACH Regulation), with later amendments. The List of Wastes (England) (Amendment) Regulations 2005. (SI 2005 No. 895). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009.
Declaration No.	608750

### 15.2. Chemical safety assessment

Chemical safety assessment performed	Yes
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## SECTION 16: Other information

Supplier's notes	The information contained in this SDS must be made available to all those who handle the product.
List of relevant H-phrases (Section 2 and 3)	H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.

CLP classification, comments	Calculation method.
Key literature references and sources for data	Suppliers Safety data sheet dated: 27.03.2017
Abbreviations and acronyms used	<p>DNEL: Derived No Effect Level</p> <p>PNEC: Predicted No Effect Concentration</p> <p>EC50: The effective concentration of substance that causes 50% of the maximum response</p> <p>LC50: Median concentration lethal to 50% of a test population.</p> <p>LD50: Lethal dose, is the amount of a substance given to a group of test animals, which causes the death of 50%.</p> <p>PBT: Persistent, Bioaccumulative and Toxic</p> <p>vPvB: very Persistent and very Bioaccumulative</p> <p>ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road</p> <p>RID: The Regulations concerning the International Carriage of Dangerous Goods by Rail</p> <p>IATA: The International Air Transport Association</p> <p>IMDG: The International Maritime Dangerous Goods Code</p>
Information added, deleted or revised	Relevant changes compared to the previous version of the safety data sheet are indicated with verticle lines in the left margin.
Checking quality of information	This SDS is quality controlled by Kiwa Kompetanse AS in Norway, certified according to the Quality Management System requirements specified in ISO 9001:2015.
Version	2
Prepared by	Kiwa Kompetanse AS, Norway by Sharon M. Løver
Contents or index of annexed ES	1. Industriell – Bruk som prosesshjelpemiddel
Exposure scenario	 <a href="#">Eksponeringssenario for Svovelsyre (NO).pdf</a>