



## SAFETY DATA SHEET

### Sulphuric Acid

#### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

<b>Product name</b>	Sulphuric Acid
<b>Synonyms, trade names</b>	Svovelsyre 96 %
<b>Applications</b>	pH-regulation. Process-chemical. Liquid for metal surface treatment. Chemical/technical industry.
<b>Supplier</b>	Acinor AS Titangt. 13 1630 Gamle Fredrikstad Norway Tel: +47 69 38 40 82 Fax: +47 69 38 40 84 E-mail: rolf.egil@acinor.no www.acinor.no
<b>Contact person</b>	Rolf Egil de Flon (E-mail: rolf.egil@acinor.no)
<b>Emergency telephone number</b>	National Poisons Information Service (NPIS), phone 0844 892 0111. WEB: <a href="http://www.toxbase.org">http://www.toxbase.org</a>
<b>EC No.</b>	231-639-5
<b>Gross formula</b>	H <sub>2</sub> -S-O <sub>4</sub>
<b>CAS No.</b>	7664-93-9
<b>Reg.No. REACH</b>	01-2119458838-20

#### 2. HAZARDS IDENTIFICATION

Symbol(s)



<b>Contains</b>	sulphuric acid ... %
<b>Risk phrases</b>	R-35 Causes severe burns.
<b>Safety phrases</b>	S-1/2 Keep locked up and out of reach of children. S-26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S-30 Never add water to this product. S-36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S-45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

CLP

Hazard pictograms

**Signal word**

Danger

**Hazard statements**

Skin Corr. 1A: H314 Causes severe skin burns and eye damage.

**Precautionary statements**

P102 Keep out of reach of children.  
 P405 Store locked up.  
 P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.  
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
 P264 Wash hands thoroughly after handling.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 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.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Ingredients**

Name	EC No.	CAS No.	Content	Symbol	Classification
sulphuric acid ... %	231-639-5	7664-93-9	95,5-96,5 %	C	R-35
Water	231-791-2	7732-18-5	3,5-4,5 %	-	

**CLP**

Name	CAS No.	REACH No.	Content	Symbol	Classification
sulphuric acid ... %	7664-93-9		95,5-96,5 %	GHS05, , Danger	Skin Corr. 1A: H314
Water	7732-18-5		3,5-4,5 %		

Section 16 contains detailed classification phrases.

### 4. FIRST AID MEASURES

**General**

Remove victim immediately from source of exposure. Provide rest, warmth and fresh air. When unconscious, loosen tight clothing and position in secured recovery position. Secure open airways by bending head backwards, cleaning the mouth and removing false teeth. When breathing is difficult, properly trained personnel may assist affected person by administering 100% oxygen. If breathing stops, provide artificial respiration. If heart stops, provide heart massage.

**Inhalation**

Move the exposed person to fresh air at once. To hospital or physician.

**Ingestion**

DO NOT INDUCE VOMITING! Rinse nose, mouth and throat with water. Rinse mouth thoroughly. NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Get medical attention immediately!

**Skin**

Chemical burns must be treated by a physician. Promptly flush contaminated skin with water. Promptly remove clothing if soaked through and flush the skin with water. Important to remove the substance from the skin immediately. Get medical attention immediately.

**Eyes**

Promptly wash eyes with plenty of water while lifting the eye lids. Make sure to remove any contact lenses from the eyes before rinsing. Get medical attention immediately. Continue to rinse.

## 5. FIRE-FIGHTING MEASURES

<b>Extinguishing media</b>	Use extinguishing media appropriate for surrounding fire. Do not use water jet as an extinguisher, as this will spread the fire.
<b>Special fire fighting procedures</b>	Move container from fire area if it can be done without risk. If possible, fight fire from protected position. Use pressurised air mask if substance is involved in a fire. Use special protective clothing. Regular protection may not be safe.
<b>Hazardous combustion products</b>	Explosive gases/vapours/fumes.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal protection</b>	Avoid inhalation of vapours and spray mist and contact with skin and eyes. Wear appropriate personal protective equipment - see Section 8.
<b>Environmental protection</b>	Avoid discharge into drains, water courses or onto the ground. Prevent spillage entering a watercourse or sewer, contaminating soil or vegetation. If this is not possible notify police and appropriate authorities immediately.
<b>Spill cleanup methods</b>	Limit spread of spilled material. Runoff or release to sewer, waterway or ground is forbidden. Absorb with sand, earth or an inert material. Neutralise with alkaline material (Lime, crushed limestone, sodium bicarbonate or soda ash). Flush area with water. Collect and reclaim or dispose in sealed containers in licensed waste. Small amounts could be picked up using moist disposable cloth. See section 13.

## 7. HANDLING AND STORAGE

<b>Usage precautions</b>	Avoid spilling, skin and eye contact. Avoid handling that generates vapors. Never add water to acid! Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. At dilution, always pour water into acid - never the opposite. Be aware of the risk of exothermic reactions.
<b>Storage precautions</b>	Keep in cool, dry, ventilated storage and closed containers. Protect from light, including direct sunrays.
<b>Storage criteria</b>	Corrosive storage.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredient name	CAS no.	Reference	LT Exp 8 Hrs	ST Exp 15 Min	Date
sulphuric acid ... %	7664-93-9	AN.	0,1 mg/m3(K)		

**Ingredient comments** WEL = Workplace exposure limits. SK= Skin absorbance, Rep= Reproduction, Carc= Carcinogenic Senz= Sensitisers, Mut= Carcinogenic

**Protective equipment**



<b>Process conditions</b>	Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash, quick drench.
<b>Ventilation</b>	Provide adequate general and local exhaust ventilation. Provide corrosion-resistant local exhaust ventilation.
<b>Respirators</b>	Gas cartridge (sulphur dioxide). Dust filter P2 (for fine dust). At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used.
<b>Protective gloves</b>	For exposure of 4 to 8 hours use gloves made of: Neoprene. 4H. Use gloves with long sleeves.
<b>Eye protection</b>	If risk of splashing, wear safety goggles or face shield.

<b>Other Protection</b>	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.
<b>Hygienic work practices</b>	Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes wet or contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Oily. Liquid.		
<b>Colour</b>	Colourless. Brownish.		
<b>Odour</b>	Stinging.		
<b>Solubility description</b>	Very soluble in water. Ethanol. Methanol.		
<b>Molecular weight</b>	98.07		
<b>Boiling point (°C, interval)</b>	~ 300	<b>Pressure</b>	760mmHg
<b>Melting/freezing point (°C, interval)</b>	~ - 13,5		
<b>Density (g/cm<sup>3</sup>)</b>	1,84	<b>Temperature (°C)</b>	20
<b>Vapour density (air=1)</b>	3,4		
<b>Vapour pressure</b>	~ 0,1 Pa	<b>Temperature (°C)</b>	
<b>pH-value, conc. solution</b>	~ 0		

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal temperature conditions and recommended use. Hygroscopic.
<b>Hazardous polymerisation</b>	Will not polymerise.
<b>Materials to avoid</b>	Water reactive material. Alcohols, glycols. Alkali metals. Massive, solid metal. Organic peroxides/hydroperoxides.
<b>Hazardous decomp. products</b>	In contact with a number of metals, hydrogen gas is formed, creating explosive mixtures with air. Sulphur dioxide.

## 11. TOXICOLOGICAL INFORMATION

<b>Toxic dose - LD 50:</b>	2440 (25 % solution) mg/kg (oral rat)
<b>Sensitization</b>	No allergic reaction is known.
<b>Genotoxicity</b>	No known heritable or mutagenic effects.
<b>Carcinogenicity</b>	Inhalation of sulphuric acid aerosol may be carcinogenic
<b>Reproduction toxicity</b>	No known hazardous effects on reproduction, fertility or to the unborn child.
<b>Inhalation</b>	Will cause burning in mouth and respiratory system. May severely damage respiratory membranes with possibly fatal results.
<b>Ingestion</b>	Causes severe burns. May cause burns in mucous membranes, throat, oesophagus and stomach.
<b>Skin</b>	Causes severe burns. May cause serious chemical burns of the skin.
<b>Eyes</b>	Causes severe burns. Risk of permanent corneal damage, loss of sight and blindness.
<b>Health warnings</b>	The product causes severe burns. Prolonged or repeated exposure could result in permanent injury.
<b>Route of entry</b>	Inhalation. Ingestion. Skin and/or eye contact.
<b>Medical considerations</b>	In case of eyedamage, continue to flush with water all the way to the doctor. Chemical burns to skin may be treated as fire caused wounds. Splash in eye requires examination by eye specialist.

## 12. ECOLOGICAL INFORMATION

LC 50, 96 Hrs, Fish mg/l:	10-100
IC 50, 72 Hrs, Algae, mg/l:	24
Ecotoxicity	Release of concentrated product into sewage will reduce the pH in the water, and the necessity of neutralization has to be evaluated.
Mobility	Easily soluble in water.
Bioaccumulative potential	Does not bioaccumulate (OECD 117): log Pow <3.
Persistence and degradability	The product contains essential inorganic compounds and the biodegradability is therefore not relevant.
Other adverse effects	Results of PBT and vPvB assessment: No data available.

## 13. DISPOSAL CONSIDERATIONS

General/cleaning	Hazardous waste.
Disposal methods	Confirm disposal procedures with environmental engineer and local regulations. Waste from smaller spills is not hazardous waste if it is neutralized with sodiumhydrogencarbonate. Larger spills that are treated with calcium carbonate is considered to be hazardous waste.
Waste class	06 01 01* sulphuric acid and sulphurous acid
Contaminated packaging	The product packaging must be disposed of in compliance with the country specific regulations.

## 14. TRANSPORT INFORMATION

Label for conveyance



Proper shipping name (national)	SVOVELSYRE med over 51 % syre
Proper shipping name (international)	Sulfuric acid solution with more than 51 per cent acid
<b>ROAD TRANSPORT (ADR):</b>	
UN no. road	1830
ADR class	Class 8: Corrosive substances.
ADR Hazard labels	8
Classification code	C1
ADR packing group	II
Hazard no. (ADR)	80 Corrosive or slightly corrosive substance.
Hazard no. (ADR)	80
<b>RAIL TRANSPORT (RID):</b>	
RID class no.	8
RID Hazard labels	8
RID packing group	II
<b>SEA TRANSPORT (IMDG):</b>	
UN no. sea	1830
IMDG class	8

IMDG packing group	II
EmS no.	F-A, S-B
<b>AIR TRANSPORT (IATA-DGR / ICAO-TI):</b>	
UN no., air	1830
IATA/ICAO class	8
IATA/ICAO packing group	II

## 15. REGULATORY INFORMATION

<b>Lists of references (Norway)</b>	National regulations for health, fire and environment labelling. Acts relating to Working Environment, Pollution Control, Prevention of Fire, Explosion and Accidents. Norwegian Component List, CLP00. Authorities: Norwegian Labour Inspection Authority, Directorate for Civil Protection and Emergency Planning, Norwegian Petroleum Directorate, Petroleum Safety Authority Norway. Transport legislation: ADR/RID, IMDG, IATA/ICAO. EU-regulation: 1272/2008/EC (CLP00), 453/2010/EC (CLP).
<b>Product declaration number (Norway)</b>	93939
<b>EC no.</b>	231-639-5

## 16. OTHER INFORMATION

<b>Explanations to R-phrases in section 3</b>	R-35 Causes severe burns.
<b>Explanations to classification in section 3</b>	H314 Causes severe skin burns and eye damage.
<b>* Information revised since the previous version of the SDS</b>	
<b>Revision comments</b>	Revision 2010.09.13 no. 1: supersedes safety data sheet of 2009.01.28. Changed section 1,8,10,11,13,16. No change in composition or classification. Revision 2011.01.06 no. 2: supersede SDS of 2010.09.13. Prepared in CLP-format and in compliance with CLP00. No change of composition or product classification.
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