

SAFETY DATA SHEET

Acinor**Sulphuric Acid 52-96 %****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 24.11.2015

Revision date 12.07.2021

1.1. Product identifier

Product name Sulphuric Acid 52-96 %

REACH Reg. No. 01-2119458838-20

CAS No. 7664-93-9

EC No. 231-639-5

Index No. 016-020-00-8

Formula H₂SO₄

Extended SDS with ES incorporated, comments See attached exposure scenarios

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 of metals.

Consumer use No

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 post@acinor.no

Website	www.acinor.no
Enterprise No.	NO 984 648 324 MVA

1.4. Emergency telephone number

Emergency telephone	Telephone number: 22 59 13 00 Description: Giftinformasjon
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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	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. P405 Store locked up. P501 Dispose of contents / container to an approved waste facility.

2.3. Other hazards

PBT / vPvB	The chemical contains no PBT or vPvB substances.
Health effect	CAS-nr.: 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	52 – 96 %	

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. For breathing difficulties oxygen may be necessary. 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 a chemical burn. Risk of perforation of the esophagus. Hospital treatment is required.
Acute symptoms and effects	Inhalation: Inhalation of vapors may cause severe irritation or burns in the respiratory tract. 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. Skin contact: Burning pain and severe corrosive skin damage. Forms blisters and can cause ulceration. Ingestion: 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 may 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 ₂), 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 ₂). Carbon monoxide (CO). Oxides of sulphur (SO _x). Hydrogen gas.

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. Beware! The product is corrosive.
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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. Neutralize spilled material with crushed lime stone, sodium carbonate (soda) or lime. Flush area with plenty of water. Do not use solvents. Collect in a suitable container and dispose as hazardous waste according to section 13.
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6.4. Reference to other sections

Other instructions	See also sections 8 and 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Provide adequate ventilation. Use protective equipment as referred to in section 8. Avoid inhalation. Avoid contact with skin and eyes. Arrange working conditions to avoid direct contact. Acid should always be added to the water upon dilution, never add water to the acid. Beware! The product is corrosive. Reacts violently with water.
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Protective safety measures

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.
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7.2. Conditions for safe storage, including any incompatibilities

Storage	Store in a tightly closed container in a dry place.
Conditions to avoid	Do not store near heat sources or expose to high temperatures. Moisture. Protect from sunlight.

Conditions for safe storage

Packaging compatibilities	PTFE, PE, PP, glass, stoneware/porcelen, carbon steel, steel coated with PTFE, containers of cast iron.
Advice on storage compatability	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.
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SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Svovelsyreaerosol, torakal fraksjon	CAS No.: 7664-93-9	Limit value (8 h) : 0,1 mg/m ³ Exposure limit letter 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)".		

8.2. Exposure controls

Precautionary measures to prevent exposure

Technical measures to prevent exposure	<p>Provide adequate 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.</p> <p>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.</p>
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Eye / face protection

Eye protection equipment	Description: Wear tight-fitting goggles or face shield.
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Additional eye protection measures	Reference to relevant standard: EN 166 (Personal eye-protection. Specifications). Eye wash facilities shall 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.
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Hand protection

Suitable materials	Butyl. Viton rubber (fluor rubber).
Unsuitable materials	Rubber (natural, latex). Nitrile. Leather. Polychloroprene/chloroprene rubber.
Breakthrough time	Value: > 2 hour(s) Comments: Butyl rubber. >= 8 time(r) Viton rubber (fluor rubber).
Thickness of glove material	Value: 0,5 mm Comments: Butyl rubber. 0,4 mm Viton Rubber
Hand protection equipment	Description: Use protective gloves that are suitable for the application. 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	Replace gloves if signs of wear and tear.

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/P3). 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.
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Colour	Colourless.
Odour	Slightly pungent odour.
Odour limit	Comments: Not determined.
pH	Status: In delivery state Value: < 0,3 Comments: 10% solution
Freezing point	Comments: ca. -32 °C (93% 20 °C); ca. -11 °C (96% 20 °C); ca. 0 °C (98% 20 °C)
Boiling point / boiling range	Comments: 282 °C (93% 20 °C) 330 °C (96% 20 °C) 326 °C (98% 20 °C)
Flash point	Comments: Not determined.
Evaporation rate	Comments: Not determined.
Flammability	Not relevant.
Explosion limit	Comments: Not relevant.
Vapour pressure	Value: 0,006 kPa Temperature: 20 °C
Vapour density	Comments: Not determined.
Relative density	Comments: See density.
Density	Comments: 1,82 g/cm ³ (93% 20 °C); 1,84 g/cm ³ (96% 20 °C); 1,84 g/cm ³ (98% 20 °C)
Solubility	Medium: Water Comments: Soluble.
Partition coefficient: n-octanol/ water	Comments: Not determined.
Auto-ignition temperature	Comments: Not determined.
Decomposition temperature	Value: ~ 800 °C
Viscosity	Value: 20 cP Comments: Dynamisk. (93-98% 25 °C)
Explosive properties	Not explosive.
Oxidising properties	Not oxidizing.

9.2. Other information

Physical hazards

Dissociation constant	Value: 1,92
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Other physical and chemical properties

Physical and chemical properties	Molecular weight : 98,07 g/mol.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Reacts 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	Arise in contact with incompatible materials (see section 10.5) and/or under inappropriate conditions (see section 10.4). Dangerous polymerisation will not occur. Generates heat on contact with water. In contact with metals, hydrogen gas may be formed.
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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
	Type of toxicity: Acute Effect tested: LC50 Route of exposure: Inhalation. Duration: 4 h Value: = 0,375 mg/l Species: Rotte
Other toxicological data	Additional test data is available from the supplier/manufacturer.

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 chemical burns to the eyes.
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.
Assessment of germ cell mutagenicity, classification	Based on available data, the classification criteria are not met.
Assessment of carcinogenicity, classification	Based on available data, the classification criteria are not met. The chemical is not classified as carcinogenic, but is marked as carcinogenic in the Norwegian working exposure limit list.
Assessment of reproductive toxicity, classification	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. Cause blisters and burns.
In case of inhalation	Vapours are corrosive. After 24-36 hours, injured persons may develop serious shortness of breath and lung oedema. Severe irritation in nose and throat. High concentrations may cause severe lung damage.
In case of eye contact	Strongly corrosive. Causes severe burns and serious eye damage. Immediate first aid is imperative. Danger of various damage to the cornea, reduction of sight and 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)
Aquatic toxicity, crustacean	Value: 29 mg/l Test duration: 24 h Species: Daphnia magna Method: EC50
Ecotoxicity	The chemical is not classified as harmful to the environment. Additional test data is available from the supplier/manufacturer.

12.2. Persistence and degradability

Persistence and degradability description/evaluation	The product is not biodegradable.
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12.3. Bioaccumulative potential

Bioaccumulation, comments	Not expected to bioaccumulate.
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12.4. Mobility in soil

Mobility	Soluble in water. The product contains substances, which are water soluble and may spread in water systems.
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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
EWL packing	EWC waste code: 150110 packaging containing residues of or contaminated by dangerous substances 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	1830
IMDG	1830

ICAO/IATA	1830
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14.2. UN proper shipping name

ADR/RID/ADN	SULPHURIC ACID
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IMDG	SULPHURIC ACID
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ICAO/IATA	SULPHURIC ACID
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14.3. Transport hazard class(es)

ADR/RID/ADN	8
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IMDG	8
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ICAO/IATA	8
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14.4. Packing group

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

Ship type required	Data lacking.
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ADR/RID Other information

Hazard No.	80
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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)	<p>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP-regulation) with later amendments.</p> <p>Regulation (EC) No 1907/2006 on the registration, evaluation, authorization and restriction of chemicals (REACH Regulation), with later amendments.</p> <p>The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009.</p>
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	Norwegian regulation on declaration: FOR-2015-05-19-541, 01.06.2015 with later amendments. Norwegian regulation on waste, 01.06.2004 no. 930, with later amendments.
Declaration No.	93939

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: 01.06.2015
Abbreviations and acronyms used	ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road DNEL: Derived No Effect Level EWC: European Waste Code (a code from the EU's common classification system for waste) EC50: The effective concentration of substance that causes 50% of the maximum response IATA: The International Air Transport Association ICAO: The International Civil Aviation Organisation IMDG: The International Maritime Dangerous Goods Code LC50: Median concentration lethal to 50% of a test population. PNEC: Predicted No Effect Concentration LD50: Lethal dose, is the amount of a substance given to a group of test animals, which causes the death of 50%. PBT: Persistent, Bioaccumulative and Toxic RID: The Regulations concerning the International Carriage of Dangerous Goods by Rail vPvB: very Persistent and very Bioaccumulative
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	3
Prepared by	Kiwa Teknologisk Institutt as.
Exposure scenario	 Eksponeringsscenario for Svovelsyre (NO).pdf