SULPHURIC ACID 2,5 mol/l

Date 16.9.2016 Previous date: -

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1 Product identifier

1.1.1 Commercial Product Name

SULPHURIC ACID 2,5 mol/l

1.1.2 Product code

FF198 10 L, FF198 500 ML

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

1.2.1 Recommended use

Laboratory chemical.

1.3 Details of the supplier of the safety data sheet

1.3.1 Supplier

Oy FF-Chemicals Ab
Street address Teollisuustie 4
Postcode and post office FI-90830 HAUKIPUDAS
Finland
Telephone +358 8 5563 193
Telefax +358 8 5563 194
Email ffc@ff-chemicals.fi

1.4 Emergency telephone number

1.4.1 Telephone number, name and address

Please contact the Emergency Centre in your own country.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

1272/2008 (CLP)

Skin Corr. 1A, H314

2.2 Label elements

1272/2008 (CLP)

GHS05

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.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

CAS/EC and Reg. number	Chemical name of the substance	Concentration	Classification
7664-93-9	Sulphuric acid	15 - 51 %	Skin Corr. 1A, H314

3.3 Other information
The full text of hazard statements are given in chapter 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures
Immediately remove any clothing soiled by the product. Take affected persons out of the danger area and lay down.

4.1.2 Inhalation
Supply fresh air; consult doctor in case of complaints.

4.1.3 Skin contact
Take off contaminated clothing immediately. Rinse with plenty of water.

4.1.4 Eye contact
Rinse opened eye for several minutes under running water then consult a doctor. Remove contact lenses. Continue rinsing. Avoid rinsing water running into the clean eye.

4.1.5 Ingestion
Rinse mouth with water. Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed
Reapiratory tract: Burning pain, sore throat, coughing, dyspnea, shoortness of breath. Symptoms may appear delayed after exposure.
Skin: Redness, pain, blisters, severe skin damage.
Eyes: Redness, pain, severe corrosion damage.
Ingested: Abdominal pain, burning sensation, shock or collapse.

4.3 Indication of immediate medical attention and special treatment needed
Immediately call a POISON CENTER or doctor/physician.

5. FIREFIGHTING MEASURES

Not flammable.

5.1 Extinguishing media

5.1.1 Suitable extinguishing media
Carbon dioxide, extinguishing powder or water mist. Fight larger fires with water spray or alcohol resistant foam.

5.1.2 Extinguishing media which must not be used for safety reasons
Direct water jet.

5.2 Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire: sulphur dioxide, sulphur trioxide, and acid fumes. In reaction with metals flammable hydrogren gas may be liberated.

5.3 Advice for firefighters
Mount respiratory protective device: chemical protective suit and pressurised respirator.

5.4 Specific methods
Move containers from fire area and cool them with water. Prevent water from contact to the acid. Use water mist to suppress acid vapours.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Stop leakage. Evacuate the contaminated area. Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing. Avoid inhalation of vapours or mist. Confine the leaked acid e.g. with earth wall. Ensure that the leaked acid does not come to contact with water.

6.2 Environmental precautions
Do not allow to enter sewers/surface or ground water.

6.3 Methods and materials for containment and cleaning up
Small leaks: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders). Dispose of contaminated material as waste. Do NOT absorb in sawdust or any flammable material. Clean surfaces. Ensure adequate ventilation.

6.4 Reference to other sections
See chapter 7 for safe handling.
See chapter 8 for personal protection.
See chapter 13 for waste management.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Do no eat, drink or smoke when using this product. Ensure adequate ventilation. Handle in fume cupboard or hood. Emergency shower and eye-bath have to be available on work place. Wash contaminated clothing before reuse.

7.2 Conditions for safe storage, including any incompatibilities
Keep cool. Store in a dry place. Keep container tightly closed. Protect from sunlight. Store in a well-ventilated place. Store away from incompatible materials and ignition sources.

7.3 Specific end use(s)
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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.2 Other information on limit values
See national TLVs.

8.2 Exposure controls

8.2.1 Appropriate engineering controls
Handle with good practice and according to safety instructions. Adequate ventilation is required. Take off contaminated clothing, clean before reuse.Wash hands thoroughly after handling.

8.2.2 Individual protection measures

8.2.2.1 Respiratory protection
Respirator when exposure to product vapours is possible.

8.2.2.2 Hand protection
Anti-acid gloves. Material e.g.butyl rubber or Viton.

8.2.2.3 Eye/face protection
Tight sitting chemical goggles or face shield.

8.2.2.4 Skin protection
Protective clothing.

8.2.3 Environmental exposure controls
Prevent spills in sewers.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Important Health Safety and Environmental Information

9.1.1 Appearance
liquid, colourless or brownish

9.1.2	**Odour**	odourless or slightly pungent odour
9.1.3	**Odour threshold**	> 1 mg/m^3 - odour does not indicate health risk
9.1.7	**Flash point**	not applicable

9.1.10	**Explosive properties**	
9.1.10.1	**Lower explosion limit**	-
9.1.10.2	**Upper explosion limit**	-
9.1.13	**Relative density**	n. 1,07 - 1,4
9.1.14	**Solubility(ies)**	
9.1.14.1	**Water solubility**	completely soluble in water
9.1.14.2	**Fat solubility (solvent - oil to be specified)**	soluble in most organic solvents
9.1.19	**Explosive properties**	no risk for explosion

9.2 Other information

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10. STABILITY AND REACTIVITY

10.1 Reactivity

Concentrated sulphuric acid has an exothermic reaction when dissolved in water. Violent reaction with most metals.

10.2 Chemical stability

Stable in normal conditions.

10.3 Possibility of hazardous reactions

Risk of explosion in reaction with chlorates, perchlorates and potassium permanganate.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Cyanides, sulfides, carbides. Aluminium, copper and their alloys. Organic and combustible materials. Bases.

10.6 Hazardous decomposition products

In reaction with metals flammable hydrogen gas may be liberated.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

11.1.1 Acute toxicity

Not classified.

11.1.2 Irritation and corrosion

Causes severe skin burns and eye damage. May cause blindness.

11.1.3 Sensitisation

Not classified.

11.1.4 Subacute, subchronic and prolonged toxicity

Not classified.
IARC: Inorganic acid mists containing sulphuric acid cause cancer in humans (group 1).

11.1.5 STOT-single exposure

May be irritating in respiratory tract.

11.1.6 STOT-repeated exposure

Prolonged exposure to sulphuric acid mist may damage dental enamel, cause chronic irritation in eyes and chronic inflammation in respiratory tract. Repeated skin contact with diluted sulphuric acid solutions may cause dryness and cracking of skin.

11.1.7 Aspiration hazard

Not classified.

11.1.8 Other information on acute toxicity

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12. ECOLOGICAL INFORMATION

12.1 Toxicity

12.1.1 Aquatic toxicity

Not classified as hazardous to the environment
Fish: LC50: 80 mg/l (24 h)
Daphnia: EC50: 30 mg/l (24 h)
Damage to aqueous organisms is caused by a strong acidic effect.

12.2 Persistence and degradability

12.2.1 Biodegradation

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12.3 Bioaccumulative potential

No bioaccumulating potential.

12.4 Mobility in soil

Mobile dissolved in water.

12.5 Results of PBT and vPvB assessment

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12.6 Other adverse effects

Do not flush in surface waters or sewers.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Handle as hazardous waste.
Waste code: 06 01 01* sulphuric acid and sulphurous acid

14. TRANSPORT INFORMATION

	Land transport ADR/RID	Sea transport IMDG/IMO	Air transport ICAO/IATA
14.1 UN number	UN2796		
14.2 UN proper shipping name	SULPHURIC ACID, containing 15-51 % acid		
14.3 Transport hazard class(es)	8		
14.4 Packing group	II		
14.5 Environmental hazards	-		
Other information			

14.6 Special precautions for users

Hazard code: 80
Tunnel restriction code: E

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. REGULATORY INFORMATION

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

15.2 Chemical safety assessment
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16. OTHER INFORMATION

16.3 Key literature references and sources for data
ECHA C&L Inventory
Finnish Institution of Occupational Health databases

16.4 Classification procedure
CLP regulation (1272/2008/EC)

16.5 List of relevant R phrases, hazard statements, safety phrases and/or precautionary statements
H314 Causes severe skin burns and eye damage.

16.6 Training advice
Handle with good practice and according to safety instructions. Handling of hazardous chemicals.

16.8 Additional information available from:
Oy FF-Chemicals Ab, Finland, tel. +358 8 5563 193
ffc@ff-chemicals.fi