F&C SAFETY DATA SHEET

Catalog No.: 910573
Product name: Sulfuric acid 40%

1. Identification of the substance/preparation and of the company/undertaking

Catalogue No.: 910573
Product name: Sulfuric acid 40%

Manufacturer/supplier identification

Company: Fertilizers & Chemicals Ltd.
P.O.box 1428, Haifa 31013, Israel

Contact for information: Tel. +972-4-8468178/179 Fax +972-4-8468296

Emergency Tel. No.: +972-4-8468229 Fax +972-4-8468110 +072-4-8451578

2. Composition/information on ingredients
aqueous solution.

Hazardous ingredients:
Name according to EC directives: Sulfuric acid

Hazard symbols: C R-phrases: 35
EC-index-No.: 016-020-00-8 causes severe burns
CAS-No.: 7664-93-9 content: 40%

3. Hazards identification

Causes severe burns.

4. First aid measures

After inhalation: fresh air. Summon doctor.

After skin contact: wash off with plenty of water. Dab with polyethylene glycol 400. Immediately remove contaminated clothing.

After eye contact: rinse out with plenty of water for at least 10
F&C SAFETY DATA SHEET

Catalog No.:  910573
Product name:  Sulfuric acid 40%

minutes with the eyelid held wide open. Immediately summon eye specialist.
After swallowing: make victim drink plenty of water (if necessary
several liters), avoid vomiting (risk of perforation!). Immediately summon doctor. Do
not attempt to neutralize.

5. Fire fighting measures
Suitable-extinguishing media:
In adaption to materials stored in the immediate neighborhood.
Special risks:
Development of hazardous combustion gases or vapours possible
in the event of fire.
Hydrogen may form upon contact with metals (danger of explosions!)
The following may develop in event of fire: sulfur oxides.
Special protective equipment for fire fighting:
Do not stay in dangerous zone without suitable chemical protection
clothing and self-contained breathing apparatus.
Other information:
Non-combustible.

6. Accidental release measures
Person-related precautionary measures:
Do not inhale vapours/aerosols. Avoid substance contact.
Procedures for cleaning/absorption:
Take up with liquid-absorbent material (e.g. chemisorb®).
Forward for disposal clean up affected area.
Environmental-protection measures:
Do not allow to enter sewerage system
Additional notes:
Render harmless: neutralize with diluted sodium hydroxide
solution or by throwing on lime, lime sand, or sodium carbonate.

7. Handling and storage
Handling:
F&C SAFETY DATA SHEET

Catalog No.: 910573
Product name: Sulfuric acid 40%

No further requirements.

Storage:
Tightly closed. Dry. In a well-ventilated place. Storage temperature: no restrictions.

8. Exposure controls/personal protection

Specific control parameter
MAK Germany (max. workplace conc.) Sulfuric acid: 1 mg/m³

Personal protective equipment:
Respiratory protection: required when vapours/aerosols are generated.

Eye protection: required
Hand protection: required
Skin protection: Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Other protective equipment: Acid-resistant protective clothing.

Industrial hygiene:
Change contaminated clothing and immerse in water. Apply skin-protective barrier cream. Wash hands and face after working with substance.

9. Physical and chemical properties

Form: liquid
Colour: colourless
Colour: odourless
pH value (20°C): strongly acid
Melting temperature: -68 °C
Boiling temperature: ~119 °C
Ignition temperature: not available
Flash point: not available
Explosion limits: lower not available
Explosion limits: upper not available
Relative vapour density: not available

Product Code: FCL 1054
REVISION: 1, October 2001
Fax: 972-4-8468296
Catalog No.: 910573
Product name: Sulfuric acid 40%

Density (20°C) 1.30 g/cm³
Solubility in water (20°C) soluble (caution! Development of heat)

10. Stability and reactivity
   Conditions to be avoided
   Strong heating.
   Substances to be avoided
   Water, alkali metals, alkali compounds, ammonia, alkaline earth metals, alcalis, acids, alkaline compounds, metals, metal alloys, phosphorus oxides, phosphorus, hydrides, halogen-halogen compounds, oxyhalogenic compounds, permanganes, nitrates, carbides, combustible substances, organic solvents, acetylidene nitriles, organic nitro compounds, anilines, peroxides, picrates, lithium silicate.

   Hazardous decomposition products
   in the event of fire: sulfur oxide

   Further information
   hygroscopic, has a corrosive effect, incompatible with metals, animal/vegetable tissues.

11. Toxicological information
   Acute toxicity
   LD₅₀ (oral, rat): 2140 mg/kg (using 25% solution):
   LC₅₀ (inhalation, rat): 510 mg/m³ /2h (calculated on the pure substance);
   Toxicological values are not available due to other dangerous properties of the substance.

   Further toxicologic information
   After inhalation of aerosols: damage to the affected mucous membranes.
   After skin contact: severe burns with formation of scabs.
   After eye contact: burns, corneal lesions.
   After swallowing: serve pain (risks of perforation!) nausea, vomiting and diarrhoea.
   After a latency period of several weeks possibly pyloric stenosis.
F&C SAFETY DATA SHEET

Catalog No.: 910573
Product name: Sulfuric acid 40%

12. Ecological information
   Ecotoxic effects:
   Biological effects: Toxic for aquatic organisms. Harmful effect due to pH shift. Toxic effect on fish and algae. Caustic even in diluted form. Does not cause biological oxygen deficit. Endangers drinking-water supplies if allowed to enter soil and/or waters in large quantities. Neutralization possible in wastewater treatment plants
   Further ecological data:
   The following applies to sulfuric acid: biological effects: toxic for aquatic organisms: LC₅₀ 96h >10 mg/l; fish; lethal as from 1.2 mg/l as from 6.3 mg/l lethal in 24 h. Harmful effect due to pH shift.

   Do not allow to enter waters, wastewater, or soil!

13. Disposal considerations
   Product:
   There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies, which will advise you on how to dispose of special waste.
   Packaging:
   Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

14. Transport information
   Transport over land ADR/RID and GGVS/GGVE (Germany)
   GGVS/GGVE class: 8 Number and letter: 1b
   ADR/RID class: 8 Number and letter: 1b
F&C SAFETY DATA SHEET

Catalog No.: 910573
Product name: Sulfuric acid 40%

Name of material: 2796 Sulfuric acid 40%

River transport over ADR/ADNR not examined

Sea transport IMDG
IMDG class: 8 UN-No.: 2796 Packaging group: II
EMS 8-06 MFAG: 700
Correct technical name: Sulfuric acid 40%

Air transport ICAO-TI and IATA-DGR
ICAO/IATA class: 8 UN/ID-No.: 2796 Packaging group: II
Correct technical name: Sulfuric acid

The transport regulations are cited according to international regulations in the form applicable in Germany (GGVS/GGVE).

Possible national deviations in other countries are not considered.

15. Regulatory information
Labeling according to EC Directives
Symbol: C Corrosive
R-phrases: 35 Causes severe burns
S-phrases: 26-30-36/37/39-45 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Never add water to this product. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
F&C SAFETY DATA SHEET

Catalog No.: 910573
Product name: Sulfuric acid 40%

16. Other information

Reduced labeling on the container due to small quantity

Date of issue: 22.12.98

All information, recommendations and suggestions herein concerning our products are based upon tests and data believed to be reliable, however, it is the users responsibility to determine the safety, toxicity and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or impressed or implied is made by F&C, as to the effects of such use, the results to be obtained or the safety and toxicity of the product nor does F&C assume any liability arising out of the use, by others, of the product referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or governmental regulation.