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MSDS No: M00213

SAFETY DATA SHEET

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

Product Name: Sulfide 1 Reagent
Catalog Number: 181632

HACH LANGE GmbH
Willstätterstrasse 11
40549 Düsseldorf, Germany
+49 -(0)211 -52880

Emergency Telephone Numbers:
(Poison Information Center Main)
(+49 (0) 6131 19240) 24 HR

SDS Number: M00213
Chemical Name: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Use of the substance/preparation: Determination of sulfides
CAS No.: Not applicable
Hazard: Harmful if inhaled. Causes severe burns. Carcinogen.
Date of MSDS Preparation:
Day: 03
Month: May
Year: 2007
Additional Emergency Response Numbers: Austria: +49 (0)6131 19240, Belgium: +32 -(0)70 -245245,
France: +33 -(0)1 -40370404, Italy: +39 -02-66101029, Netherlands: +31 -(0)30 -2748888, Switzerland: +41 -
(0)1 -2515151

2. COMPOSITION / INFORMATION ON INGREDIENTS

Demineralized Water

EEC Number: 2317912
CAS No.: 7732 -18-5
Percent Range: 35,0 - 45,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s) (R phrase details given in Heading 16): Not applicable
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: Not established

Other component

EEC Number: Not applicable
CAS No.: Not applicable
Percent Range: 0,1 - 1,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s) (R phrase details given in Heading 16): Not applicable
TLV: Not established
PEL: Not established

EU Occupational Exposure Limits: Not established

Sulfuric Acid

EEC Number: 2316395

CAS No.: 7664-93-9

Percent Range: 55,0 - 65,0

Percent Range Units: weight / weight

Ingredient EEC Symbol: C - CORROSIVE

Ingredient R phrase(s) (R phrase details given in Heading 16): R 35

TLV: 1 mg/m³ (TWA); 3 mg/m³ (STEL)

PEL: 1 mg/m³

EU Occupational Exposure Limits: 0,1 mg/m³

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Clear, colorless

Odor: None

EU Symbols: C - CORROSIVE

R PHRASES: R 35: Causes severe burns.

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): Causes severe burns

Skin Contact (EC): Causes severe burns

Skin Absorption (EC): None Reported

Target Organs (SA E): None Reported

Ingestion (EC): Causes: severe burns May cause: nausea vomiting death circulatory disturbances rapid pulse and respirations diarrhea

Target Organs (Ing E): None Reported

Inhalation: Harmful Causes: severe burns May cause: teeth erosion mouth soreness difficult breathing

Target Organs (Inh E): Lungs

Medical Conditions Aggravated: Pre-existing: Eye conditions Respiratory conditions

Chronic Effects: Chronic overexposure may cause erosion of the teeth chronic irritation or inflammation of the lungs cancer

Cancer / Reproductive Toxicity Information:

An ingredient of this mixture is: IARC Group 1: Recognized Carcinogen

Sulfuric Acid - The IARC evaluation was based on exposure to the mist or vapor of concentrated sulfuric acid generated during chemical processes.

Additional Cancer / Reproductive Toxicity Information: None reported

Toxicologically Synergistic Products: None reported

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.

Skin Contact (First Aid): Wash skin with plenty of water for 15 minutes. Remove contaminated clothing. Call physician immediately.

Ingestion (First Aid): Do not induce vomiting. Give 1 -2 glasses of water. Call physician immediately. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. Call physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Not Flammable, but reacts with most metals to form flammable hydrogen gas. During a fire, corrosive and toxic gases may be generated by thermal decomposition.

Hazardous Combustion Products: This material will not burn. May emit acrid smoke and fumes.

Fire / Explosion Hazards: Contact with metals gives off hydrogen gas which is flammable. May react violently with: strong bases water

Static Discharge: None reported.

Mechanical Impact: None reported

Extinguishing Media: Dry chemical. Do NOT use water.

Extinguishing Media NOT To Be Used: Not applicable. Do NOT use water.

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:

Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

Containment Technique: Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment. Dike large spills to keep spilled material from entering sewage and drainage systems or bodies of water.

Clean-up Technique: Remove all combustible materials from the spill area. Absorb spilled liquid with non-reactive sorbent material. Work in an approved fume hood. Working in small batches, dilute with excess water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Filter to remove solids. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when: any quantity is spilled. If conditions warrant, increase the size of the evacuation.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes skin clothing. Do not breathe mist or vapors. Wash thoroughly after handling. Use with adequate ventilation. Maintain general industrial hygiene practices when using this product.

Storage: Store between 10° and 25°C. Keep container tightly closed when not in use. Keep away from: alkalis oxidizers reducers metals

Special Packaging Instructions: Not applicable

Use of the substance/preparation: Determination of sulfides

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby. Have a safety shower nearby. Use general ventilation to minimize exposure to mist, vapor or dust. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin / Hand Protection: disposable latex gloves lab coat

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin clothing. Do not breathe: mist/vapor. Wash thoroughly after handling. Use with adequate ventilation. Keep away from: alkalis metals oxidizers reducers

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Clear, colorless
Physical State: Liquid
Odor: None
pH: < 0,5
Vapor Pressure: Not determined
Vapor Density (air = 1): Not determined
Boiling Point: ~ 100 °C; ~ 212 °F
Melting Point: Not applicable
Flash Point: Not applicable
Method: Not applicable
Autoignition Temperature: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Specific Gravity (water = 1): 1,500
Evaporation Rate (water = 1): Not determined
Volatile Organic Compounds Content: Not determined
Partition Coefficient (n -octanol / water): Not determined
Solubility:
Water: Miscible
Acid: Miscible
Other: Not determined
Metal Corrosivity:
Steel: 0,048 in/yr
Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Exposure to light. Extreme temperatures Heating to decomposition.
Reactivity / Incompatibility: May react violently in contact with: acetic acid alkalies chlorosulfonic acid oxidizers reducers
Hazardous Decomposition: Contact with metals may release flammable hydrogen gas. Heating to decomposition releases toxic and/or corrosive fumes of: sulfur oxides
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:
LD50: None reported
LC50: None reported
Dermal Toxicity Data: None reported
Skin and Eye Irritation Data: None reported
Mutation Data: None reported
Reproductive Effects Data : None reported
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Ingredient Toxicological Data: Sulfuric acid Oral rat LD50 = 2140 mg/kg; Inhalation rat LC50 = 347 ppm/1 hour

An ingredient of this mixture is: IARC Group 1: Recognized Carcinogen
Sulfuric Acid - The IARC evaluation was based on exposure to the mist or vapor of concentrated sulfuric acid generated during chemical processes.

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product.

Ingredient Ecological Information: Sulfuric Acid: The 48 -Hour TLm in flounder is 100 -300 ppm.

13. DISPOSAL CONSIDERATIONS

NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country -specific regulations or must be passed to a packaging return system.

14. TRANSPORT INFORMATION

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Sulphuric Acid

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ICAO Hazard Class: 8

ICAO Subsidiary Risk: NA

ICAO UN/ID Number: UN1830

ICAO Packing Group: II

I.M.O.:

I.M.O. Proper Shipping Name: Sulphuric Acid

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I.M.O. Hazard Class: 8

I.M.O. Subsidiary Risk: NA

I.M.O. UN Number: UN1830

I.M.O. Packing Group: II

A.D.R.:

A.D.R. Proper Shipping Name: Sulphuric Acid

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A.D.R Hazard Class: 8

A.D.R. Subsidiary Risk: NA

A.D.R. UN -Number:: 1830

A.D.R. Packing Group: II

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit Hazard Class: 9 UN Number 3316

15. REGULATORY INFORMATION

National Inventories:

EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.

EEC Number: Not applicable

EEC LABEL COPY:

EU Symbols: C - CORROSIVE

R PHRASES: R 35: Causes severe burns.

S PHRASES: S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. 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).

16. OTHER INFORMATION

References: Technical Judgment. In-house information. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987.

R PHRASES: R 35: Causes severe burns.

Use of the substance/preparation: Determination of sulfides

Revisions Summary: Updates in Section(s) 14, 15,

Legend:

NA - Not Applicable w/w - weight/weight

ND - Not Determined w/v - weight/volume

NV - Not Available v/v - volume/volume

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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