World Headquarters
Hach Company
P.O.Box 389
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(970) 669 -3050

MSDS No: M00195

SAFETY DATA SHEET

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

Product Name: HydraVer ® 2 Hydrazine Reagent
Catal og Number: 179032

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: M00195
Chemical Name: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Use of the substance/preparation: Determination of hydrazine
CAS No.: Not applicable
Hazard: Causes severe burns. Harmful if inhaled. Carcinogen.
Date of MSDS Preparation:
Day : 03
Month: May
Year: 2006
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: 60,0 - 70,0
Percent Range Units: volume / volume
Ing redient 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 appli cable
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: 15,0 - 25,0
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/m ^{3}

p-Dimethylaminobenzaldehyde

EEC Number: 2028190
CAS No.: 100-10-7
Percent Range: 5,0 - 15, 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: 3 mg/m ^{3}, Inhal able dust

3. HAZARDS IDENTIFICATION

Emergency Overview:
Appearance: Clear, yellow liquid
Odor: Irritating
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
Ingesti on (EC): Causes: severe burns May cause: nausea vomiting diarrhea rapid pulse and respirations circulatory disturbances
Target Organs (Ing E): None Reported
Inhalation: Harmful Causes: severe burns May cause: difficult breathing mouth soreness teeth erosion
Target Organs (Inh E): Lungs
Medical Conditions Aggravated: Pre-existing: Eye conditions Skin 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 reporte d

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

5. FIRE FIGHTING MEASURES

Flammable Properties: Not Flamma ble, 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: Toxic fumes of: sulfur oxides.
Fire / Explosion Hazards: Contact w ith metals gives off hydrogen gas which is flammable May react violently with: strong bases strong oxidizers strong reducers
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 Instru ctions for disposal assistance.
Containment Technique: Absorb spilled liquid with non -reactive sorbent material. Stop spilled material from being released to the environment.
Clean -up Technique: Cover spilled material with an alkali, such as soda ash or sodium bicarbonate. Scoop up slurry into a large beaker. Dilute with a large excess of water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. 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 clothing skin Do not breathe mist or vapors. Wash thoroughly after handling. Use with ade quate 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. Protect from: light Keep away from: alkalies oxidizers reducers
Special Packaging Instructions: Not applicable
Use of the substance/preparation: Determination of hydrazine

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Cont rols: Have a safety shower nearby. Have an eyewash station 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 Protec tion: 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/vapo r Wash thoroughly after handling. Use with adequate ventilation. Keep away from: alkalies metals oxidizers reducers

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Clear, yellow liquid

Physical State: Liquid

Odor: Irritating

pH: < 0,5

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: Not determined

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): 1,260

Evaporation Rate (water = 1): Not determined

Volatile Organic Compounds Content: Not determined

Partition Coefficient (n -octanol / water): Not determined

Solubility:

Water: Miscible

Acid: Misc ible

Other: Not determined

Metal Corrosivity:

Steel: 0,573 in/yr

Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under prope r conditions.

Conditions to Avoid: Extreme temperatures Heating to decomposition.

Reactivity / Incompatibility: May react violently in contact with: acetic acid chlorosulfonic acid strong bases 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; p -Dimethylaminobenzaldehyde Oral rat LDLo = 500 mg/kg

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. ECOLOGICA L 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 t he 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: UN2796
ICAO Packing Group: II
I.M.O.:
I.M.O. Proper Shipping Name: Sulphuric Acid
--
I.M.O. Hazard Class: 8
I.M.O. Subsidiary Risk: NA
I.M.O. UN Number: UN2796
I.M.O. Pack ing 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:: 2796
A.D.R. Packing Group: II
Additional Information: This product may be shipped as part of a ch emical 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 2: Keep out of reach of children. S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 45: In case of accident o r if you feel unwell, seek medical advice immediately (show the label where possible).

16. OTHER INFORMATION

References: Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. Vendor Information. The Merck Index, 11th Ed. Rahway, New Jersey: Merck and Co., Inc., 1989. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Technical Judgment. In -house information. TLV's Threshold Limit Values and Biological Exposure Indices for 1992 -1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332 -2983. 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 hydrazine

Revision Summary: Updates in Section(s) 14,

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.

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