

SAFETY DATA SHEET

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

Product Name: DPD in 1N Sulfuric Acid Solution
Catalog Number: 2872949

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

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

SDS Number: M02350

Responsible Person:

Safety Data Sheet written::

Chemical Name: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

Use of the substance/preparation: Analytical reagent

CAS No.: Not applicable

Hazard: Causes eye burns. May cause irritation. Carcinogen.

Date of MSDS Preparation:

Day: 19

Month: November

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

Additional European Addresses:

Austria:

Belgium:

Denmark:

France:

Ireland:

Italy:

Netherlands:

Spain:

Sweden:

Switzerland:

United Kingdom:

2. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Clear, colorless

Odor: None

EU Symbols: Xi - IRRITATING

R PHRASES: R 36/38: Irritating to eyes and skin.

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): May cause irritation

Skin Contact (EC): Causes irritation May cause allergic reaction

Skin Absorption (EC): Will be absorbed through the skin.

Target Organs (SA E): None Reported

Ingestion (EC): May cause: irritation of the mouth and esophagus Can cause: allergic reaction

Target Organs (Ing E): None Reported

Inhalation: May cause: irritation of nose and throat difficult breathing mouth soreness teeth erosion

Target Organs (Inh E): Lungs

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

Chronic Effects: Chronic overexposure may cause cancer allergic skin reactions

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

3. COMPOSITION / INFORMATION ON INGREDIENTS

N,N-Diethyl-p-Phenylenediamine

EEC Number: 2022141

CAS No.: 93-05-0

Percent Range: 1,0 - 5,0

Percent Range Units: weight / volume

Ingredient EEC Symbol: C - CORROSIVE T - TOXIC

Ingredient R phrase(s): R 25: Toxic if swallowed. R 34: Causes burns.

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: Not established

Demineralized Water

EEC Number: 2317912

CAS No.: 7732-18-5

Percent Range: 90,0 - 100,0

Percent Range Units: volume / volume

Ingredient EEC Symbol: Not applicable

Ingredient R phrase(s): 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: 1,0 - 5,0

Percent Range Units: weight / volume

Ingredient EEC Symbol: C - CORROSIVE

Ingredient R phrase(s): R 35: Causes severe burns.

TLV: 1 mg/m³ (TWA); 3 mg/m³ (STEL)

PEL: 1 mg/m³

EU Occupational Exposure Limits: 0,1 mg/m³

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. Call physician immediately.

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

Inhalation: Remove to fresh air.

5. FIRE FIGHTING MEASURES

Flammable Properties: During a fire, corrosive and toxic gases may be generated by thermal decomposition.

Hazardous Combustion Products: This material will not burn.

Fire / Explosion Hazards: None reported

Static Discharge: None reported.

Mechanical Impact: None reported

Extinguishing Media: Dry chemical.

Extinguishing Media NOT To Be Used: Not applicable

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.

Clean-up Technique: Cover spilled material with an alkali, such as soda ash or sodium bicarbonate. Scoop up slurry into a large beaker. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Dispose of material in an E.P.A. approved hazardous waste facility. 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: a gallon or more of liquid is spilled. If conditions warrant, increase the size of the evacuation.

7. HANDLING AND STORAGE

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

Storage: Keep container tightly closed when not in use.

Special Packaging Instructions: Not applicable

Use of the substance/preparation: Analytical reagent

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have a safety shower nearby. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin / Hand Protection: lab coat disposable latex gloves

Inhalation Protection: adequate ventilation
Precautionary Measures: Avoid contact with: eyes Do not breathe: mist/vapor Wash thoroughly after handling.
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: 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): Not determined
Evaporation Rate (water = 1): Not determined
Volatile Organic Compounds Content: Not determined
Partition Coefficient (n-octanol / water): Not applicable
Solubility:
 Water: Miscible
 Acid: Miscible
 Other: Not determined
Metal Corrosivity:
 Steel: Not determined
 Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Extreme temperatures Heating to decomposition.
Reactivity / Incompatibility: Incompatible with: caustics
Hazardous Decomposition: 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 hr; N,N-Diethyl-p-Phenylenediamine: oral rat LD50 ~ 200 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. 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: Corrosive Liquid, Acidic, Inorganic, N.O.S.
(<10% Sulfuric Acid in Solution)

ICAO Hazard Class: 8

ICAO Subsidiary Risk: NA

ICAO UN/ID Number: UN3264

ICAO Packing Group: III

I.M.O.:

I.M.O. Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S.
(<10% Sulfuric Acid in Solution)

I.M.O. Hazard Class: 8

I.M.O. Subsidiary Risk: NA

I.M.O. UN Number: UN3264

I.M.O. Packing Group: III

A.D.R.:

A.D.R. Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S.
(<10% Sulfuric Acid in Solution)

A.D.R Hazard Class: 8

A.D.R. Subsidiary Risk: NA

A.D.R. UN-Number: 3264

A.D.R. Packing Group: III

Additional Information: There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is NOT in a set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

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: Xi - IRRITATING

R PHRASES: R 36/38: Irritating to eyes and skin.

S PHRASES: S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 36: Wear suitable protective clothing. S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

16. OTHER INFORMATION

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. Outside Testing. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. Technical Judgment. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992.

Use of the substance/preparation: Analytical reagent

Revision Summary:

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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