

The following list contains the Material Safety Data Sheets you requested. Please scroll down to view the requested MSDS(s).

<u>Product</u>	<u>MSDS</u>	<u>Distributor</u>	<u>Format</u>	<u>Language</u>	<u>Quantity</u>
2150232	N/A	Hach Company	EEC	English	1

Total Enclosures: 1

World Headquarters
Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

MSDS No: M00487

SAFETY DATA SHEET

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

Product Name: PAN Indicator Solution 0,3%
Catalog Number: 2150232

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: M00487

Chemical Name: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

Use of the substance/preparation: Determination of nickel

CAS No.: Not applicable

Hazard: Causes severe eye irritation. May be embryotoxic.

Date of MSDS Preparation:

Day: 12

Month: 01

Year: 2006

Additional Emergency Response Numbers: Austria: +49 (0)6131 19240, Belgium: +32-(0)70-245245, France: +33 (0)1-40370404, Italy: +39-0266101029, Netherlands: +31 -(0)30-2748888, Switzerland: +41-(0)1-2515151

2. COMPOSITION / INFORMATION ON INGREDIENTS

N,N-Dimethylformamide

EEC Number: 2006795

CAS No.: 68122

Percent Range: 55,0 - 65,0

Percent Range Units: volume / volume

Ingredient EEC Symbol: T - TOXIC

Ingredient R phrase(s) (R phrase details given in Heading 16): R 20/21 R 61 R 36

TLV: 10 ppm (skin)

PEL: 10 ppm (skin)

EU Occupational Exposure Limits: 10 ppm (30 mg/m³)

1-(2-Pyridylazo)-2-naphthol

EEC Number: 2016379

CAS No.: 85858

Percent Range: 0,1 - 1,0

Percent Range Units: weight / volume

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/m³, Inhalable dust

Octylphenoxypolyethoxyethanol

EEC Number: Not Applicable

CAS No.: Not Applicable

Percent Range: 25,0 - 35,0

Percent Range Units: weight / volume

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

Demineralized Water

EEC Number: 2317912
CAS No.: 7732185
Percent Range: 5,0 - 15,0
Percent Range Units: volume / volume
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

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Clear, red-orange liquid
Odor: Amine
EU Symbols: T - TOXIC
R PHRASES: R 61: May cause harm to the unborn child. R 20/21: Harmful by inhalation and in contact with skin. R 36: Irritating to eyes.

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): Causes irritation
Skin Contact (EC): May cause irritation
Skin Absorption (EC): Harmful if absorbed through the skin May cause kidney damage May cause liver damage May cause nausea May cause vomiting
Target Organs (SA E): Liver Kidneys
Ingestion (EC): May cause: abdominal pain nausea vomiting diarrhea blood pressure problems kidney damage liver damage
Target Organs (Ing E): Liver Kidneys
Inhalation: Harmful Effects similar to those of ingestion. May cause: respiratory tract irritation
Target Organs (Inh E): Liver Kidneys
Medical Conditions Aggravated: Pre-existing: Eye conditions Skin conditions Respiratory conditions Liver conditions Kidney conditions
Chronic Effects: Dimethylformamide is capable of producing cumulative systemic injury when repeatedly inhaled or absorbed through the skin.
Cancer / Reproductive Toxicity Information:
IARC Group 3: Non-classifiable
Dimethylformamide
Additional Cancer / Reproductive Toxicity Information: Contains: an experimental carcinogen. an experimental mutagen. an experimental teratogen. In laboratory tests, application of DMF to the skin of pregnant rats caused fetal deaths when the dosages were close to the lethal dose level for the mother.
Toxicologically Synergistic Products: Exposure to and/or consumption of alcohol may increase toxic effects of this product. Reports of increased possibilities of facial flushing from inhalation of vapors after ingestion of alcohol. Effects resemble porphyria.

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.
Skin Contact (First Aid): Wash skin with soap and plenty of water.
Ingestion (First Aid): Give a slurry of powdered activated charcoal. Induce vomiting using syrup of ipecac or by sticking finger down throat. Never give anything by mouth to an unconscious person. Call physician immediately.
Inhalation: Remove to fresh air. Give artificial respiration if necessary. Call physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Combustible Liquid This material does NOT sustain combustion when tested according to the UN Recommendation's "Methods of Testing for Combustibility".

Hazardous Combustion Products: Toxic fumes of: carbon monoxide, carbon dioxide. dimethylamine

Fire / Explosion Hazards: Combustible liquid

Static Discharge: None reported.

Mechanical Impact: None reported

Extinguishing Media: Water. Carbon dioxide Dry chemical.

Extinguishing Media NOT To Be Used: Not applicable Not applicable 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: Releases of this material may contaminate the environment. Remove all combustible material from spill area. Remove all ignition and spark-creating sources from the spill area. Cover spilled liquid with a commercially available flammable liquid sorbent such as vapor barrier blanket or activated carbon to avoid evolution of fumes. Vapors may travel to a source of ignition and flash back. May be ignited by: heat, sparks, or flames.

Clean-up Technique: Eliminate all sources of ignition. Do not breathe the fumes. Cover with an inert material, such as sand. Use only non-sparking tools. Sweep up material. Incinerate material at 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: 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. Maintain general industrial hygiene practices when using this product.

Storage: Protect from: oxidizers heat halogenated hydrocarbons metals

Special Packaging Instructions: Not applicable

Use of the substance/preparation: Determination of nickel

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby. Use a fume hood to avoid exposure to dust, mist or vapor. 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 neoprene latex gloves

Inhalation Protection: laboratory fume hood

Precautionary Measures: Avoid contact with: eyes skin clothing Do not breathe: mist/vapor Wash thoroughly after handling. Protect from: heat halogenated hydrocarbons oxidizers metals

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Clear, red-orange liquid

Physical State: Liquid

Odor: Amine

pH: 9,45

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: 103°C (217,4°F)

Melting Point: Not determined

Flash Point: 61 - 63 ° C (141 - 145 ° F)
Method: Closed cup
Autoignition Temperature: Not determined
Flammability Limits:
Lower Explosion Limits: Not determined
Upper Explosion Limits: Not determined
Specific Gravity (water = 1): 1,006
Evaporation Rate (water = 1): 0,594
Volatile Organic Compounds Content: Not determined
Partition Coefficient (n-octanol / water): Not applicable
Solubility:
Water: Soluble
Acid: Soluble
Other: Not determined
Metal Corrosivity:
Steel: 0,0007 in/yr
Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Contact with heat, sparks, open flames or other ignition sources. Extreme temperatures
Reactivity / Incompatibility: Incompatible with: halogenated organic compounds. May react violently in contact with: oxidizers
Hazardous Decomposition: Toxic fumes of: carbon monoxide carbon dioxide
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: Dimethylformamide: Cytogenic analysis - human - inhalation - 12300 µg/m³/Y, Cytogenetic analysis - human - lymphocytes - 100 nmol/l
Reproductive Effects Data: Dimethylformamide: Inhalation rat TCLo= 4 mg/m³/4H 1-19 days after conception - Pre-implantation mortality, fetotoxicity, embryo death
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Ingredient Toxicological Data: Dimethylformamide: Oral rat LD₅₀ = 2800 mg/kg, Skin rabbit LD₅₀ = 4720 mg/kg;
Octylphenoxypolyethoxyethanol: Oral rat LD₅₀ = 1800 mg/kg

IARC Group 3: Non-classifiable
Dimethylformamide

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
No ecological data available for this product.
Ingredient Ecological Information: Octylphenoxypolyethoxyethanol: Bluegill sunfish (Lepomis macrochirus) 96 hour dynamic > 10 mg/l (Slightly toxic)

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: Not Currently Regulated

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ICAO Hazard Class: NA

ICAO Subsidiary Risk: NA

ICAO UN/ID Number: NA

ICAO Packing Group: NA

I.M.O.:

I.M.O. Proper Shipping Name: Not Currently Regulated

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I.M.O. Hazard Class: NA

I.M.O. Subsidiary Risk: NA

I.M.O. UN Number: NA

I.M.O. Packing Group: NA

A.D.R.:

A.D.R. Proper Shipping Name: Not Currently Regulated

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A.D.R. Hazard Class: NA

A.D.R. Subsidiary Risk: NA

A.D.R. UN-Number: NA

A.D.R. Packing Group: NA

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: T - TOXIC

R PHRASES: R 61: May cause harm to the unborn child. R 20/21: Harmful by inhalation and in contact with skin. R 36: Irritating to eyes.

S PHRASES: S 25: Avoid contact with eyes. S 53: Avoid exposure - obtain special instructions before use. 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. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. In-house information. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. 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. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993.

R PHRASES: R 61: May cause harm to the unborn child. R 20/21: Harmful by inhalation and in contact with skin. R 36: Irritating to eyes.

Use of the substance/preparation: Determination of nickel

Revision Summary: Updates in Section(s) 14,

Legend:

NA - Not Applicable

ND - Not Determined

NV - Not Available

w/w - weight/weight

w/v - weight/volume

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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