

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

Product	MSDS	Distributor	Format	Language	Quantity
2122449	N/A	Hach Company	ROWGHS	English	1

Total Enclosures: 1

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

MSDS No: M00388

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: PAN Indicator Solution 0.1%

Catalog Number: 2122449

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

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M00388

Chemical Name: Not applicable

CAS Number: Not applicable

Additional CAS No. (for hydrated forms): Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

Intended Use: Laboratory Reagent Determination of manganese

2. HAZARDS IDENTIFICATION

GHS Classification:

Hazard categories: . Reproductive Toxicity: Repr. 1B Serious Eye Damage/Eye Irritation: Eye Dam. 1 .

GHS Label Elements:

DANGER



Hazard statements: May damage the unborn child. . Causes serious eye damage. May damage the unborn child. Suspected of damaging fertility. .

Precautionary statements: Wear protective gloves / protective clothing / eye protection / face protection. IF ON SKIN: Wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician. Obtain special instructions before use. Wear eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. Dispose of contents/container according to state, local, federal or national regulations.

HMIS:

Health: 1*

Flammability: 1

Reactivity: 0

Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 2

Flammability: 1

Reactivity: 0

Symbol: Not applicable

WHMIS Hazard Classification: Class D, Division 2, Subdivision A - Very toxic materials (other toxic effects)

WHMIS Symbols: Other Toxic Effects

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:

N,N-Dimethylformamide

CAS Number: 68-12-2

Chemical Formula: C₃H₇NO

GHS Classification: Flam. Liq. 3, H226; Acute Tox. 5 -Orl, H303; Acute Tox. 4 -Derm, H312; Acute Tox. 4 -Inh, H332; Eye Irrit. 2, H319; Repr. 1B, H360D;

Percent Range (Trade Secret): 25.0 - 30.0

Percent Range Units: weight / weight

PEL: 10 ppm (skin)

TLV: 10 ppm (skin)

WHMIS Symbols: Flammable / Combustible Other Toxic Effects

Octylphenoxypolyethoxyethanol

CAS Number: 9036-19-5

Chemical Formula: (C₂H₄O)_nC₁₄H₂₂O

GHS Classification: Acute tox. 5 - Orl, H303; Eye Dam. 1, H318

Percent Range (Trade Secret): 5.0 - 15.0

Percent Range Units: weight / volume

PEL: Not established

TLV: Not established

WHMIS Symbols: Other Toxic Effects

Hazardous Components according to GHS: No

Demineralized Water

CAS Number: 7732-18-5

Chemical Formula: H₂O

GHS Classification: Not a dangerous substance according to GHS.

Percent Range (Trade Secret): 35.0 - 45.0

Percent Range Units: volume / volume

PEL: Not established

TLV: Not established

WHMIS Symbols: Not applicable

Ammonium Acetate

CAS Number: 631-61-8

Chemical Formula: CH₃COONH₄

GHS Classification: Not a dangerous substance according to GHS.

Percent Range (Trade Secret): 15.0 - 25.0

Percent Range Units: weight / weight

PEL: Not established

TLV: Not established

WHMIS Symbols: Not applicable

Pyridylazo Naphthol

CAS Number: 85-85-8

Chemical Formula: C₁₅H₁₁N₃O

GHS Classification: Not a dangerous substance according to GHS

Percent Range (Trade Secret): < 0.1

Percent Range Units: weight / weight

PEL: Not established

TLV: Not established

WHMIS Symbols: Not applicable

4. FIRST AID MEASURES

General Information: In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

Advice to doctor: Treat symptomatically.

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

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

Inhalation: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Call physician.

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.

5. FIRE FIGHTING MEASURES

Flammable Properties: Can burn in fire, releasing toxic vapors.

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

Extinguishing Media: Water. Alcohol foam. Dry chemical. Carbon dioxide

Extinguishing Media NOT To Be Used: Not determined

Fire / Explosion Hazards: May react violently with: nitric acid metal nitrates strong oxidizers alkali metals

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

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

Containment Technique: Releases of this material may contaminate the environment. Dike the material to create a barrier to combustibles.

Clean-up Technique: Do not breathe the fumes. If permitted by regulation, Absorb spilled liquid with non-reactive sorbent material. Incinerate material at a government approved hazardous waste facility. Decontaminate the area of the spill with a soap solution. Otherwise, Pick up spill for disposal and place in a closed container. Dispose of in accordance with local, state and federal regulations or laws.

Evacuation Procedure: Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when: any quantity is spilled.

DOT Emergency Response Guide Number: Not applicable

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: Keep away from: acids oxidizers alkali metals halogens Store between 10° and 25°C. Protect from: heat

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Maintain adequate ventilation to keep vapor level below TWA for chemicals in this product. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: chemical splash goggles

Skin Protection: lab coat neoprene latex gloves In the EU, the selected gloves must satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it.

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 Keep away from: acids/acid fumes alkali metals oxidizers

TLV: Not established

PEL: Not established

For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, red-orange liquid

Physical State: Liquid

Molecular Weight: Not applicable

Odor: Ammonia

Odor Threshold: Not available

pH: 8.0

Metal Corrosivity:

Corrosivity Classification: Not classified as corrosive to metals according to GHS criteria.

Steel: Not determined

Aluminum: Not determined

Specific Gravity/ Relative Density (water = 1; air = 1): 1.044

Viscosity: Not determined

Solubility:

Water: Miscible

Acid: Miscible

Other: Not determined

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

Coefficient of Water / Oil: Not applicable

Melting Point: Not determined

Decomposition Temperature: Not determined

Boiling Point: 101°C; 214°F

Vapor Pressure: Not available

Vapor Density (air = 1): Not available

Evaporation Rate (water = 1): 0.25

Volatile Organic Compounds Content: Not available

Flammable Properties: Can burn in fire, releasing toxic vapors.

Flash Point: >93°C; >200°F

Method: Closed cup

Flammability Limits:

Lower Explosion Limits: Not available

Upper Explosion Limits: Not available

Autoignition Temperature: Not available

Explosive Properties:

Not classified according to GHS criteria.

Oxidizing Properties:

Not classified according to GHS criteria.

Reactivity Properties:

Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

Gas under Pressure:

Not classified according to GHS criteria.

Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Mechanical Impact: None reported

Static Discharge: None reported.

Reactivity / Incompatibility: Incompatible with: nitric acid metal nitrates halogens alkali metals oxidizers

Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: nitrogen oxides carbon dioxide carbon monoxide

Conditions to Avoid: Heat Heating to decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available for mixture.

Toxicologically Synergistic Products: Exposure to and/or consumption of alcohol may increase toxic effects of this product.

Acute Toxicity: Acute Toxicity Estimate (ATE) - Calculated from Ingredient Toxicity Data

ATE Oral Rat LD50 = 8277 mg/kg
ATE Dermal Rat LD50 = 3577 mg/kg
ATE inhalation Rat LC50 = 21.8 mg/l

Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met.

Skin Corrosion/Irritation: Based on classification principles, the classification criteria are not met.

DMF: Skin human 100%/24H - Standard Draize Test - MILD

Eye Damage: Corrosive to eyes.

DMF: Eye rabbit 100 mg - Rinsed Draize Test - SEVERE; Octylphenoxypolyethoxyethanol: Eye rabbit 1% SEVERE

Sensitization: Based on classification principles, the classification criteria are not met.

CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): Contains a reproductive toxin.

DMF: Cytogenetic analysis-hmn-inh-12300 µg/m3/Y; Cytogenetic analysis-hmn lymphocytes-100nmol/l;

Octylphenoxypolyethoxyethanol: DNA inhibition-hmn lymphocytes 5 ppm

DMF: Inh rat TCLo=4mg/m3/4H 1-19d post-conception-Pre-implantation mortality, fetotoxicity, embryo death; Skin rat TDLo=7552mg/kg 6-15d post-conception-fetotoxicity; oral mouse TDLo = 1820mg/kg 6-15d post-conception-fetotoxicity

An ingredient of this mixture is: IARC Group 3: Non-classifiable

Dimethylformamide

This product does NOT contain any NTP listed chemicals.

This product does NOT contain any OSHA listed carcinogens.

Symptoms/Effects:

Ingestion: May cause: abdominal pain nausea vomiting diarrhea blood pressure problems kidney damage liver damage

Inhalation: Harmful Effects similar to those of ingestion. May cause: respiratory tract irritation

Skin Absorption: Harmful if absorbed through the skin May cause kidney damage May cause liver damage May cause nausea May cause vomiting

Chronic Effects: Dimethylformamide is capable of producing cumulative systemic injury when repeatedly inhaled or absorbed through the skin. Chronic overexposure may cause kidney damage liver damage

Medical Conditions Aggravated: Pre-existing: Liver conditions Kidney conditions

12. ECOLOGICAL INFORMATION

Product Ecological Information: No product ecological information available.

Mobility in soil: No data available

Ingredient Ecological Information: Octylphenoxypolyethoxyethanol - Bluegill sunfish (*Lepomis macrochirus*), 96 hour dynamic: > 10 mg/l

CEPA statement: Octylphenoxypolyethoxyethanol: Inherently toxic to aquatic organisms, not persistent or bioaccumulative; N,N-Dimethylformamide: Persistent, not inherently toxic to aquatic organisms or bioaccumulative.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable

Special Instructions (Disposal): Dispose of material in an E.P.A. approved hazardous waste facility.

Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

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

D.O.T.:

D.O.T. Proper Shipping Name: Not Currently Regulated

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Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

T.D.G.:

Proper Shipping Name: Not Currently Regulated

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Hazard Class: NA
Subsidiary Risk: NA
UN Number/PIN: NA
Packing Group: NA
I.C.A.O.:
I.C.A.O. Proper Shipping Name: Not Currently Regulated

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Hazard Class: NA
Subsidiary Risk: NA
ID Number: NA
Packing Group: NA
I.M.O.:
Proper Shipping Name: Not Currently Regulated

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Hazard Class: NA
Subsidiary Risk: NA
ID Number: NA
Packing Group: NA
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

U.S. Federal Regulations:

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard Delayed (Chronic) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product contains a chemical(s) subject to the reporting requirements of Section 313 of Title III of SARA.

302 (EHS) TPQ (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): Ammonium acetate 5000 lbs. Dimethylformamide 1 lb.

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Ammonium acetate - RQ 5000 lbs.

RCRA: Contains no RCRA regulated substances.

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): None

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

CAS Number: Not applicable

Canadian Inventory Status: All ingredients of this product are DSL Listed.

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

Australian Inventory (AICS) Status: All ingredients are listed.

New Zealand Inventory (NZIoC) Status: All components either listed or exempt.

Korean Inventory (KECI) Status: All components of this product are either listed, listed as the anhydrous compound or exempt.

Japan (ENCS) Inventory Status: All components either listed or exempt.

China (PRC) Inventory (MEP) Status: All components either listed or exempt.

16. OTHER INFORMATION

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). 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. CCINFO RTECS. Canadian Centre for

Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. 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. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Vendor Information. In-house information. Technical Judgment.

Complete Text of H phrases referred to in Section 3: H226 Flammable liquid and vapour. Not applicable H312 Harmful in contact with skin. H332 Harmful if inhaled. H318 Causes serious eye damage. H319 Causes serious eye irritation. H360D May damage the unborn child.

Revision Summary: . Updates in Section(s) 6, 13,

Date of MSDS Preparation:

Day: 22

Month: July

Year: 2015

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

CCOHS Evaluation Note: It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS. This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). This SDS has been prepared in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3).

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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