

(11120)

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

MSDS No: M00109

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** DPD Free Chlorine Reagent  
**Catalog Number:** 1407799

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:** M00109  
**Chemical Name:** Not applicable  
**CAS No.:** Not applicable  
**Chemical Formula:** Not applicable  
**Chemical Family:** Not applicable  
**PIN:** NA  
**Intended Use:** Laboratory Use Determination of Free Chlorine  
**Date of MSDS Preparation:**  
**Day:** 19  
**Month:** March  
**Year:** 2012  
**MSDS Prepared:** MSDS prepared by Product Compliance Department extension 3350  
HMIRC Registry Number 8079 Granted: 12/02/24

### 2. HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance:** White or light pink powder

**Physical State:** Solid

**Odor:** None

MAY CAUSE EYE AND RESPIRATORY TRACT IRRITATION  
MAY CAUSE ALLERGIC SKIN REACTION

**HMIS:**

**Health:** 2

**Flammability:** 1

**Reactivity:** 0

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

**Potential Health Effects:**

**Eye Contact:** May cause irritation

**Skin Contact:** May cause irritation May cause allergic reaction

**Skin Absorption:** None Reported

**Target Organs:** None Reported

**Ingestion:** DPD Oral rat LD50 studies revealed decreased locomotor activity, depressed respiration, muscle spasms, loss of righting reflex and death. Autopsies revealed ulcerated stomach, enteritis, gas and congested lungs.

**Target Organs:** None reported

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

**Target Organs:** None reported

**Medical Conditions Aggravated:** Allergy or sensitivity to salts of N,N-Diethyl-p-phenylenediamine Pre-existing: Eye conditions Skin conditions Respiratory conditions

**Chronic Effects:** DPD may cause allergic skin reactions in some people causing severe skin rashes and itching.

**Cancer / Reproductive Toxicity Information:**

This product does NOT contain any IARC listed chemicals.

This product does NOT contain any NTP listed chemicals.

APPROVED MATERIAL

NOV 09 2012

MSDS # 11120

APPROVED BY *[Signature]*

*Additional Cancer / Reproductive Toxicity Information:* None reported  
*Toxicologically Synergistic Products:* None reported  
*WHMIS Hazard Classification:* Class D, Division 2, Subdivision B - Toxic material (other toxic effects)  
*WHMIS Symbols:* Other Toxic Effects

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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### Salt of N,N-Diethyl-p-Phenylenediamine

*Percent Range:* 1.0 - 5.0  
*Percent Range Units:* weight / weight  
*CAS No.:* Confidential  
*LD50:* Oral rat (female) LD50 = 695 mg/kg; oral rat (male and female) LD50 = 970 mg/kg.  
*LC50:* None reported  
*TLV:* Not established  
*PEL:* Not established  
*Ingredient WHMIS Symbol:* Other Toxic Effects  
HMIRC Registry Number 8079 Granted: 12/02/24

#### Carboxylate Salt

*Percent Range:* 55.0 - 65.0  
*Percent Range Units:* weight / weight  
*CAS No.:* Confidential  
*LD50:* None reported  
*LC50:* None reported  
*TLV:* Not established  
*PEL:* Not established  
*Ingredient WHMIS Symbol:* Not applicable  
HMIRC Registry Number 8079 Granted: 12/02/24

#### Sodium Phosphate, Dibasic

*Percent Range:* 30.0 - 40.0  
*Percent Range Units:* weight / weight  
*CAS No.:* 7558-79-4  
*LD50:* Oral rat LD50 = 17 g/kg.  
*LC50:* None reported  
*TLV:* Not established  
*PEL:* Not established  
*Ingredient WHMIS Symbol:* Not applicable

#### Disodium EDTA

*Percent Range:* 1.0 - 5.0  
*Percent Range Units:* weight / weight  
*CAS No.:* 139-33-3  
*LD50:* Oral rat LD50 = 2000 mg/kg  
*LC50:* None reported  
*TLV:* Not established  
*PEL:* Not established  
*Ingredient WHMIS Symbol:* Not applicable

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### 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. Call physician if irritation develops.  
*Ingestion (First Aid):* Call physician immediately. Give 1-2 glasses of water under medical supervision. Never give anything by mouth to an unconscious person.  
*Inhalation:* Remove to fresh air.

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### 5. FIRE FIGHTING MEASURES

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

**Flash Point:** Not applicable

**Method:** Not applicable

**Flammability Limits:**

**Lower Explosion Limits:** Not applicable

**Upper Explosion Limits:** Not applicable

**Autoignition Temperature:** Not determined

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

**Fire / Explosion Hazards:** None reported

**Static Discharge:** None reported.

**Mechanical Impact:** None reported

**Extinguishing Media:** Use media appropriate to surrounding fire conditions

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

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## 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:** Stop spilled material from being released to the environment.

**Clean-up Technique:** Scoop up spilled material into a large beaker and dissolve with water. 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 as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

**D.O.T. Emergency Response Guide Number:** Not applicable

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## 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes, skin, clothing. Do not breathe dust. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Store between 10° and 25°C. Protect from: light, moisture, heat

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** 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 Protection:** disposable 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. lab coat

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes, skin, clothing. Do not breathe: dust. Wash thoroughly after handling. Protect from: light, moisture, heat

**TLV:** Not established

**PEL:** Not established

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** White or light pink powder

**Physical State:** Solid

**Molecular Weight:** Not applicable

**Odor:** None

**pH:** of 1% soln. = 6.35 @ 25°C

**Vapor Pressure:** Not applicable

**Vapor Density (air = 1):** Not applicable

**Boiling Point:** Not applicable

**Melting Point:** 110 C decomp

**Specific Gravity/ Relative Density (water = 1; air =1):** 1.76

**Evaporation Rate (water = 1):** Not applicable

**Volatile Organic Compounds Content:** Not applicable

**Coefficient of Water / Oil:** Not applicable

**Solubility:**

**Water:** Soluble

**Acid:** Soluble

**Other:** Not determined

**Metal Corrosivity:**

**Steel:** Not determined

**Aluminum:** Not determined

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## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.

**Conditions to Avoid:** Exposure to light. Excess moisture Heating to decomposition.

**Reactivity / Incompatibility:** None reported

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

**Hazardous Polymerization:** Will not occur.

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## 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

**Ingredient Toxicological Data:** Salt of DPD: oral rat (female) LD50 = 695 mg/kg; oral rat (male and female) LD50 = 970 mg/kg.; sodium phosphate dibasic oral rat LD50 = 17 g/kg; EDTA disodium salt oral rat LD50 = 2000 mg/kg.

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## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** --

No ecological data available for this product. Mobility in soil: No data available

**Ingredient Ecological Information:** Salt of N,N-Diethyl-p-Phenylenediamine: Daphnia magna 48 hr EC50 = 10.8 mg/L; NOEC 12.5 mg/L @24 hr, 3.1 mg/L @48 hr; ready biodegradability to 60% in 21 days.

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## 13. DISPOSAL CONSIDERATIONS

**Special Instructions (Disposal):** Dilute to 3 to 5 times the volume with cold water. Open cold water tap completely, slowly pour the material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

**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.

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## 14. TRANSPORT INFORMATION

**T.D.G.:**

**Proper Shipping Name:** Not Currently Regulated

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**Hazard Class:** NA

**PIN:** NA

**Group:** NA

**Subsidiary Risk:** 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.

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## 15. REGULATORY INFORMATION

### *National Inventories:*

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

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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## 16. OTHER INFORMATION

**References:** 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. In-house information. Technical Judgment. Outside Testing. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989.

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### **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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