

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

MSDS No: M00110

# SAFETY DATA SHEET

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## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** DPD Total Chlorine Reagent

**Catalog Number:** 1406499

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:** M00110

**Chemical Name:** Not applicable

**CAS No.:** Not applicable

**Chemical Formula:** Not applicable

**Chemical Family:** Mixture

**UN Number/PIN:** NA

**Intended Use:** Laboratory Reagent Indicator for total chlorine

**Date of MSDS Preparation:**

**Day:** 24

**Month:** February

**Year:** 2015

**MSDS Prepared:** MSDS prepared by Product Compliance Department extension 3350

HMIRC Registry Number 8080 Granted: 12/02/24

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## 2. HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance:** White or light pink powder

**Physical State:** Solid

**Odor:** Odorless

MAY CAUSE EYE AND RESPIRATORY TRACT IRRITATION

MAY CAUSE ALLERGIC SKIN REACTION

**HMIS:**

**Health:** 1

**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

**Skin Absorption:** No effects anticipated

**Target Organs:** Not applicable

**Ingestion:** May cause iodism, which symptoms include skin rash, conjunctivitis, runny nose, sneezing, bronchitis, headache, fever and irritation of mucous membranes. 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. Large doses may cause: lethargy loss of strength loss of coordination difficult breathing diarrhea

**Target Organs:** Liver

**Inhalation:** Very large doses may cause: respiratory tract irritation Effects similar to those of ingestion.

**Target Organs:** Liver

**Medical Conditions Aggravated:** Allergy or sensitivity to salts of N,N-Diethyl-p-phenylenediamine Pre-existing: Eye conditions Skin conditions Respiratory conditions Persons with pre-existing respiratory conditions may be more susceptible to the effects of Potassium Iodide exposure.

**Chronic Effects:** Chronic overexposure may cause allergic skin reactions, hypothyroidism, liver damage. DPD may cause allergic skin reactions in some people causing severe skin rashes and itching. Iodine overdose, 'iodism', may cause skin rash, runny nose, headaches, fever and bronchitis.

**Cancer / Reproductive Toxicity Information:**

This product does NOT contain any IARC listed chemicals.

This product does NOT contain any NTP listed chemicals.

**Additional Cancer / Reproductive Toxicity Information:** Maternal ingestion of potassium iodide during pregnancy may cause congenital goiter and hyperthyroidism in the newborn infant.

**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

**Potassium Iodide**

**Percent Range (Trade Secret):** 20.0 - 30.0

**Percent Range Units:** weight / weight

**CAS No.:** 7681-11-0

**LD50:** Oral Human LD50 = 500 - 5000 mg/kg; Oral Rat LD50 = 2779 mg/kg; Oral Mouse LD50 = 1862 mg/kg; Oral Mouse LD50 = 1000 mg/kg

**LC50:** None reported

**TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**PEL:** 15 mg/m<sup>3</sup> as total dust; 5 mg/m<sup>3</sup> as respirable dust

**Ingredient WHMIS Symbol:** Not applicable

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

**Percent Range (Trade Secret):** 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:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust

**Ingredient WHMIS Symbol:** Other Toxic Effects

HMIRC Registry Number 8080 Granted: 12/02/24

**Carboxylate Salt**

**Percent Range (Trade Secret):** 40.0 - 50.0

**Percent Range Units:** weight / weight

**CAS No.:** Confidential

**LD50:** None reported

**LC50:** None reported

**TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust

**Ingredient WHMIS Symbol:** Not applicable

HMIRC Registry Number 8080 Granted: 12/02/24

**Sodium Phosphate, Dibasic**

**Percent Range (Trade Secret):** 20.0 - 30.0

**Percent Range Units:** weight / weight

**CAS No.:** 7558-79-4

**LD50:** Oral rat LD50 = 17 g/kg

**LC50:** None reported

**TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust

**Ingredient WHMIS Symbol:** Not applicable Other Toxic Effects

**Ethylenediaminetetraacetic Acid, Disodium Salt**

**Percent Range (Trade Secret):** < 1.0

**Percent Range Units:** weight / weight

**CAS No.:** 6381-92-6  
**LD50:** Oral rat LD50 = 2000 mg/kg  
**LC50:** None reported  
**TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust  
**PEL:** 15 mg/m<sup>3</sup> as total dust; 5 mg/m<sup>3</sup> as respirable dust  
**Ingredient WHMIS Symbol:** Other Toxic Effects

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

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## 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Can burn in fire, releasing toxic vapors. Material is not classified as flammable according to GHS criteria. During a fire, this product decomposes to form toxic gases.  
**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, iodine compounds, phosphorus oxides, potassium oxides, sodium monoxide, 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. Releases of this material may contaminate the environment.  
**Clean-up Technique:** Scoop up spilled material into a large beaker and dissolve with water. If permitted by regulation, flush reacted material to the drain with a large excess of water. Otherwise, decontaminate the area of the spill with a soap solution. 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 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, heat, moisture

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Have an eyewash station nearby. Use general ventilation to minimize exposure to mist, vapor or dust.

**Personal Protective Equipment:**

**Eye Protection:** safety glasses with top and side shields

**Skin Protection:** lab coat nitrile 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:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes skin clothing Do not breathe: dust Wash thoroughly after handling.

Protect from: light heat moisture

**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:** Odorless

**pH:** 6.35 (1% solution)

**Vapor Pressure:** Not applicable

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

**Boiling Point:** Not applicable

**Melting Point:** 145 °C (293 °F)

**Specific Gravity/ Relative Density (water = 1; air =1):** 1.79

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

**Volatile Organic Compounds Content:** Not applicable

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

**Solubility:**

**Water:** Soluble

**Acid:** Soluble

**Other:** Not determined

**Metal Corrosivity:**

**Steel:** 0.038 in/yr

**Aluminum:** 0.006 in/yr

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## 10. STABILITY AND REACTIVITY

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

**Conditions to Avoid:** Exposure to light. Excess moisture Extreme temperatures

**Reactivity / Incompatibility:** Incompatible with: oxidizers

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

**Hazardous Polymerization:** Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

**Product Toxicological Data:**

**LD50:** Oral Rat LD50 = 7000 mg/kg (male); Oral Rat (female) LD50 = 4700 mg/kg.

**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:** Salt of DPD: Oral Rat (female) LD50 = 695 mg/kg; Oral Rat (male) LD50 = 970 mg/kg. Potassium iodide: Oral Rat LD50 = 4800 mg/kg; Oral Mouse LD50 = 1862 mg/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 Do not release into the environment. Do not place in landfill. Recycle appropriately.

**Ingredient Ecological Information:** EDTA, disodium salt: 72 hr Green algae ErC50 = 10-100 mg/L. DPD Salt: 48 hr Daphnia magna EC50 = 10.8 mg/L

CEPA categorization for ingredients are as follows:

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### 13. DISPOSAL CONSIDERATIONS

**Special Instructions (Disposal):** Dilute to 3 to 5 times the volume with cold water. If permitted by regulation, 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. Otherwise, Check with national, local municipal and state authorities and waste contractors for pertinent local information on the disposal of this article.

**Empty Containers:** Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste.

**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

**UN Number/PIN:** NA

**Packing 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:** DSL Listed: Yes

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:** CCINFO MSDS/FTSS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. The Merck Index, 11th Ed. Rahway, New Jersey: Merck and Co., Inc., 1989. Outside Testing. 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.

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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.  
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