

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

MSDS No: M00110

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: DPD Total Chlorine Reagent
Catalog Number: 2198200

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: 08

Month: May

Year: 2014

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

HMIRC Registry Number 8080 Granted: 12/02/24

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

3. COMPOSITION / INFORMATION ON INGREDIENTS

Potassium Iodide

Percent Range: 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/m³ as inhalable dust; 3 mg/m³ as respirable dust

PEL: 15 mg/m³ as total dust; 5 mg/m³ as respirable dust

Ingredient WHMIS Symbol: Not applicable

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: 10 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust

PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust

Ingredient WHMIS Symbol: Other Toxic Effects

HMIRC Registry Number 8080 Granted: 12/02/24

Carboxylate Salt

Percent Range: 40.0 - 50.0

Percent Range Units: weight / weight

CAS No.: Confidential

LD50: None reported

LC50: None reported

TLV: 10 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust

PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust

Ingredient WHMIS Symbol: Not applicable

HMIRC Registry Number 8080 Granted: 12/02/24

Sodium Phosphate, Dibasic

Percent Range: 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/m³ as inhalable dust; 3 mg/m³ as respirable dust

PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust

Ingredient WHMIS Symbol: Not applicable Other Toxic Effects

Ethylenediaminetetraacetic Acid, Disodium Salt

Percent Range: < 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/m³ as inhalable dust; 3 mg/m³ as respirable dust

PEL: 15 mg/m³ as total dust; 5 mg/m³ as respirable dust

Ingredient WHMIS Symbol: Other Toxic Effects

4. FIRST AID MEASURES

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

Skin Contact (First Aid): Wash skin with soap and plenty of water. Call physician if irritation develops.

Ingestion (First Aid): Never give anything by mouth to an unconscious person. Give large quantities of water. If you feel unwell, contact a physician.

Inhalation: Remove to fresh air.

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.

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

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

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

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

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.

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.

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:

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.

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.

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.

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.

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.

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