

World Headquarters
Hach Company
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MSDS No: M00110

SAFETY DATA SHEET

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

Product Name: DPD Total Chlorine Reagent
Catalog Number: 2503025

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: M00110

Chemical Name: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

Use of the substance/preparation: Indicator for total chlorine

CAS No.: Not applicable

Hazard: May cause sensitization. May cause irritation.

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

Potassium Iodide

EEC Number: 2316594

CAS No.: 7681140

Percent Range: 20,0 - 30,0

Percent Range Units: weight / weight

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

Salt of N,N-Diethyl-p-Phenylenediamine

EEC Number: Confidential

CAS No.: Confidential

Percent Range: 1,0 - 5,0

Percent Range Units: weight / weight

Ingredient EEC Symbol: Xn - HARMFUL

Ingredient R phrase(s) (R phrase details given in Heading 16): R 22 R 36 R 52/53

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

Sodium Phosphate, Dibasic

EEC Number: 2314487

CAS No.: 7558794

Percent Range: 20,0 - 30,0

Percent Range Units: weight / weight

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

Other component

EEC Number: Not applicable
CAS No.: Not applicable
Percent Range: 0,1 - 1,0
Percent Range Units: weight / weight
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

Carboxylate Salt

EEC Number: Confidential
CAS No.: Confidential
Percent Range: 40,0 - 50,0
Percent Range Units: weight / weight
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

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: White or light pink powder
Odor: None
EU Symbols: Not applicable
R PHRASES: Not applicable

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): May cause irritation
Skin Contact (EC): May cause irritation May cause allergic reaction
Skin Absorption (EC): No effects anticipated
Target Organs (SA E): Not applicable
Ingestion (EC): Causes: lethargy loss of strength loss of coordination difficult breathing diarrhea May cause iodism, which symptoms include skin rash, conjunctivitis, runny nose, sneezing, bronchitis, headache, fever and irritation of mucous membranes. DPD 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 (Ing E): Liver
Inhalation: May cause: respiratory tract irritation Effects similar to those of ingestion.
Target Organs (Inh E): 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. Iodines 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.

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

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.

5. FIRE FIGHTING MEASURES

Flammable Properties: During a fire, this product decomposes to form toxic gases.

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

Extinguishing Media NOT To Be Used: 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: 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.

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

Special Packaging Instructions: Not applicable

Use of the substance/preparation: Indicator for total chlorine

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

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 / Hand Protection: disposable latex gloves, 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, heat, moisture

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: White or light pink powder

Physical State: Solid

Odor: None
pH: of 1% soln = 6,35 @ 20°C
Vapor Pressure: Not applicable
Vapor Density (air = 1): Not applicable
Boiling Point: Not applicable
Melting Point: 145° C
Flash Point: Not applicable
Method: Not applicable
Autoignition Temperature: Not determined
Flammability Limits:
 Lower Explosion Limits: Not applicable
 Upper Explosion Limits: Not applicable
Specific Gravity (water = 1): 1,79
Evaporation Rate (water = 1): Not applicable
Volatile Organic Compounds Content: Not applicable
Partition Coefficient (n-octanol / water): Not determined
Solubility:
 Water: Soluble
 Acid: Soluble
 Other: Not determined
Metal Corrosivity:
 Steel: 0,038 in/yr
 Aluminum: 0,006 in/yr

10. STABILITY / 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 (female) LD₅₀ = 4700 mg/kg; Oral rat (male) LD₅₀ = 7000 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: DPD Oral rat LD₅₀ = 970 mg/kg; Potassium Iodide Oral mouse LDLo = 1862 mg/kg; Sodium Phosphate, Dibasic Oral rat LD₅₀ = 17 g/kg

This product does NOT contain any IARC listed chemicals.

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
No ecological data available for this product.
Ingredient Ecological Information: --
No ecological data available for the ingredients of this product.

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 or are placed on the market in quantities less than 10 kg per year.

EEC Number: Not applicable

EEC LABEL COPY:

EU Symbols: Not applicable

R PHRASES: Not applicable

S PHRASES: Not applicable

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.

R PHRASES: Not applicable

Use of the substance/preparation: Indicator for total chlorine

Revision Summary: Updates in Section(s) 14,

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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