

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** DPD Oxalate N,N-Diethyl-p-Phenylenediamine, Oxalic Acid Salt  
**Catalog Number:** 608424

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:** M01264  
**Chemical Name:** 1,4-Benzenediamine, N,N-diethyl-, ethanedioate (2:1)  
**CAS Number:** 62637-92-7  
**Additional CAS No. (for hydrated forms):** Not applicable  
**Chemical Formula:**  $C_{10}H_{16}N_2(COOH)_2$   
**Chemical Family:** Aromatic Amines  
**Intended Use:** Laboratory Use

## 2. HAZARDS IDENTIFICATION

**GHS Classification:**

**Hazard categories:** Germ Cell Mutagenicity: Muta. 2 Respiratory or Skin Sensitization: Skin Sens.1 Hazardous to the Aquatic Environment: Aquatic Chronic 2

**GHS Label Elements:**

WARNING



**Hazard statements:** Suspected of causing genetic defects. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.

**Precautionary statements:** Wear protective gloves / protective clothing / eye protection / face protection. Obtain special instructions before use. Avoid breathing dust/fume/gas/mist/vapours/spray. Contaminated work clothing should not be allowed out of the workplace. Handle environmental release according to local, state, federal, provincial requirements. Wear eye protection. IF ON SKIN: Wash with plenty of soap and water. IF exposed or concerned: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Dispose of contents/container according to state, local, federal or national regulations.

**HMIS:**

**Health:** 3

**Flammability:** 1

**Reactivity:** 0

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

**NFPA:**

**Health:** 3

**Flammability:** 1

**Reactivity:** 0

**Symbol:** Not applicable

**WHMIS Hazard Classification:** Class D, Division 1, Subdivision B - Toxic material (immediate effects)

**WHMIS Symbols:** Acute Poison

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Hazardous Components according to GHS:**

**N,N-Diethyl-p-Phenylenediamine, Oxalic Acid Salt**

**CAS Number:** 62637-92-7

**Chemical Formula:**  $C_{10}H_{16}N_2(COOH)_2$

**GHS Classification:** Muta. 2, H341; Skin Sens. 1, H317; Aquat. Chrn. 2, H411

**Percent Range (Trade Secret):** 100.0

**Percent Range Units:** weight / weight

**PEL:** Not established

**TLV:** Not established

**WHMIS Symbols:** Acute Poison

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## 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):** Wash skin with plenty of water for 15 minutes. Remove contaminated clothing. Call physician immediately.

**Inhalation:** Remove to fresh air. Give artificial respiration if necessary. Call physician.

**Ingestion (First Aid):** Do not induce vomiting. Call physician immediately.

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## 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. Evacuate area and fight fire from a safe distance.

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

**Extinguishing Media NOT To Be Used:** Not applicable

**Fire / Explosion Hazards:** None reported

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

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

**Clean-up Technique:** If permitted by regulation, Scoop up spilled material into a large beaker and dissolve with water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Flush reacted material to the drain with a large excess of water. 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 general area (50 foot radius or as directed by your facility's emergency response plan) when: a pound or more of loose powder is spilled. If conditions warrant, increase the size of the evacuation.

**DOT Emergency Response Guide Number:** 154

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## 7. HANDLING AND STORAGE

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

**Storage:** Store in a cool, dry place. Keep away from: oxidizers

**Flammability Class:** Not applicable

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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:** laboratory fume hood

**Precautionary Measures:** Avoid contact with: eyes skin clothing Do not breathe: dust Wash thoroughly after handling. Use with adequate ventilation. Keep away from: oxidizers

**TLV:** Not established

**PEL:** Not established

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

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** White to pale yellow powder

**Physical State:** Solid

**Molecular Weight:** 254.12

**Odor:** None

**Odor Threshold:** Odorless

**pH:** 3.8 (5% sol'n)

**Metal Corrosivity:**

**Corrosivity Classification:**

**Steel:** Not determined

**Aluminum:** 0.034 in/yr (0.86 mm/yr)

**Specific Gravity/ Relative Density (water = 1; air =1):** 1.226

**Viscosity:** Not applicable

**Solubility:**

**Water:** Soluble

**Acid:** Soluble in dilute H<sub>2</sub>SO<sub>4</sub>

**Other:** Soluble in Methanol, Aqueous Ammonia

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

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

**Melting Point:** Not determined

**Decomposition Temperature:** Not available

**Boiling Point:** Not determined

**Vapor Pressure:** Not applicable

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

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

**Volatile Organic Compounds Content:** Not applicable

**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

**Explosive Properties:**

Not applicable Not classified according to GHS criteria.

**Oxidizing Properties:**

Not applicable Not classified according to GHS criteria.

**Reactivity Properties:**

Not applicable 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.

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## 10. STABILITY AND REACTIVITY

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

**Mechanical Impact:** None reported

**Static Discharge:** None reported.

**Reactivity / Incompatibility:** May react violently in contact with: oxidizers

**Hazardous Decomposition:** Toxic fumes of: nitrogen oxides

**Conditions to Avoid:** Extreme temperatures

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## 11. TOXICOLOGICAL INFORMATION

**Toxicokinetics, Metabolism and Distribution:** No information available

**Toxicologically Synergistic Products:** None reported

**Acute Toxicity:** Based on classification principles, the classification criteria are not met.

**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.

**Eye Damage:** Based on classification principles, the classification criteria are not met.

**Sensitization:** Contains a sensitizing compound.

**CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction):** Potential S. typhimurium TA100 mutagen Structural Alert for nongenotoxic carcinogenicity

IARC Listed: No

NTP Listed: No

O.S.H.A. Listed: No

**Symptoms/Effects:**

**Ingestion:** May cause: abdominal pain abdominal cramps muscular twitching central nervous system depression

**Inhalation:** Causes: irritation of nose and throat

**Skin Absorption:** Will be absorbed through the skin. Effects similar to those of ingestion

**Chronic Effects:** None reported

**Medical Conditions Aggravated:** Allergy or sensitivity to salts of N,N-Diethyl-p-phenylenediamine

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## 12. ECOLOGICAL INFORMATION

**Product Ecological Information: --**

Ecological structure-activity relationship (SAR) Estimation (ECOSAR U.S. EPA 2009)

CEPA Categorization: Not Persistent or Bioaccumulative. Not inherently toxic to aquatic organisms.

Neutral organic: fish 96 hr LC50 = 79.9 mg/L; daphnid 48 hr LC50 = 47.45 mg/L; algae 96 hr EC50 = 22.54 mg/L.

**Ingredient Ecological Information: --**

Not applicable

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## 13. DISPOSAL CONSIDERATIONS

**EPA Waste ID Number:** Not applicable

**Special Instructions (Disposal):** Work in an approved fume hood. Dilute material with excess water making a weaker than 5% solution. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Open cold water tap completely, slowly pour the reacted 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. 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.

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## 14. TRANSPORT INFORMATION

### **D.O.T.:**

**D.O.T. Proper Shipping Name:** Environmentally hazardous substances, solid, n.o.s.  
(N,N-Diethyl 1,4-Benzenediamine Ethanedioate)

**Hazard Class:** 9

**Subsidiary Risk:** NA

**ID Number:** UN3077

**Packing Group:** III

### **T.D.G.:**

**Proper Shipping Name:** Environmentally hazardous substance, solid, n.o.s.  
(N,N-Diethyl 1,4-Benzenediamine Ethanedioate)

**Hazard Class:** 9

**Subsidiary Risk:** NA

**UN Number/PIN:** 3077

**Packing Group:** III

### **I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Environmentally Hazardous Substance, Solid, nos  
(N,N-Diethyl 1,4-Benzenediamine Ethanedioate)

**Hazard Class:** 9

**Subsidiary Risk:** NA

**ID Number:** UN3077

**Packing Group:** III

### **I.M.O.:**

**Proper Shipping Name:** Environmentally Hazardous Substance, Solid, nos  
(N,N-Diethyl 1,4-Benzenediamine Ethanedioate)

**Hazard Class:** 9

**Subsidiary Risk:** NA

**ID Number:** UN3077

**Packing Group:** III

**Marine Pollutant:**

**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

### **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

**S.A.R.A. Title III Section 313 (40 CFR 372):** This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

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

**304 CERCLA RQ (40 CFR 302.4):** Not applicable

**304 EHS RQ (40 CFR 355):** Not applicable

**Clean Water Act (40 CFR 116.4):** Not applicable

**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:** TSCA Listed: Yes

**CAS Number:** 62637-92-7  
**Canadian Inventory Status:** DSL Listed: Yes  
**EEC Inventory Status:** EINECS Listed: Yes  
**Australian Inventory (AICS) Status:** Not Listed  
**New Zealand Inventory (NZIoC) Status:** Listed  
**Korean Inventory (KECI) Status:** Not listed - exempt. Quantity < 100 kg per annum.  
**Japan (ENCS) Inventory Status:** Some ingredients are not listed or exempt.  
**China (PRC) Inventory (MEP) Status:** Listed

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## 16. OTHER INFORMATION

**References:** 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Cassaret and Doull's Toxicology, 3rd Ed. New York: Macmillan Publishing Co., Inc., 1986. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. Technical Judgment. Vendor Information.

**Complete Text of H phrases referred to in Section 3:** H341 Suspected of causing genetic defects. H317 May cause an allergic skin reaction. H411 Toxic to aquatic life with long lasting effects.

**Revision Summary:** . Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

**Date of MSDS Preparation:**

**Day:** 11

**Month:** February

**Year:** 2015

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

**CCOHS Evaluation Note:** 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).

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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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