

Issuing Date 5/18/2011

Revision Date 8/6/2012

Revision Number 2

**1. PRODUCT AND COMPANY IDENTIFICATION**

|                                   |   |
|-----------------------------------|---|
| <b>Product Name</b>               | <b>DPD #1 TABLET</b>  |
| <b>Product Code(s)</b>            | 6903  |
| <b>Recommended Use</b>            | Test kit reagent for water testing. Industrial (not for food or food contact use).  |
| <b>Company</b>                    | LaMotte Company, Inc.<br>802 Washington Avenue<br>P.O. Box 329<br>Chestertown, MD 21620<br>USA  |
| <b>Emergency Telephone Number</b> | 24 Hour Emergency Number (CHEM-TEL):<br>USA, Canada, Puerto Rico 1-800-255-3924<br>Outside North American Continent (Call collect) 813-248-0585 |

**2. HAZARDS IDENTIFICATION****Emergency Overview**

Harmful if swallowed

May cause skin, eye, and respiratory tract irritation

May produce an allergic reaction

**Appearance** White**Physical State** Solid, Tablet**Odor** Odorless

|  |  |
|--|--|
| <b>OSHA Regulatory Status</b>            | While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product. |
| <b>Potential Health Effects</b>          |  |
| <b>Principle Routes of Exposure</b>      | Skin contact, Ingestion.   |
| <b>Acute Toxicity</b>                    |  |
| <b>Eyes</b>                              | May cause irritation.  |
| <b>Skin</b>                              | May cause irritation.  |
| <b>Inhalation</b>                        | May cause irritation of respiratory tract.   |
| <b>Ingestion</b>                         | May be harmful if swallowed.   |
| <b>Chronic Effects</b>                   | May produce an allergic reaction.  |
| <b>Main Symptoms</b>                     | Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.  |
| <b>Aggravated Medical Conditions</b>     | None known.  |
| <b>Interactions with Other Chemicals</b> | None known.  |
| <b>Environmental Hazard</b>              | No information available.  |

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name                          | CAS-No     | Weight % |
|--|------------|----------|
| N,N-Diethyl-p-phenylenediamine sulfate | 6283-63-2  | 1        |
| Polyamino carboxylic acid              | -          | 0 - 10%  |
| Aromatic carboxylic acid salt          | -          | 1-5      |
| Phosphate salt                         | -          | 5-10     |
| Boric acid                             | 10043-35-3 | 8        |
| Carboxylic acid                        | -          | 15-25    |
| Carbonate salt                         | -          | 20-30    |
| Potassium salt                         | -          | 25-30    |

Ingredients not specifically listed by name are proprietary to the LaMotte Company, registered under the State of New Jersey Trade Secret protection law, assigned the NJTSRN#80100291-5002p, and may be disclosed only in a medical emergency.

### 4. FIRST AID MEASURES

|                                   |   |
|-----------------------------------|---|
| <b>General Advice</b>             | Do not get in eyes, on skin, or on clothing.  |
| <b>Eye Contact</b>                | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. If irritation persists or develops, contact a physician.  |
| <b>Skin Contact</b>               | Wash off immediately with soap and plenty of water for at least 15 minutes. If irritation develops or persists, consult physician.  |
| <b>Inhalation</b>                 | Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and contact emergency personnel. Call a physician immediately.   |
| <b>Ingestion</b>                  | Do not induce vomiting without medical advice. Drink plenty of water. Clean mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.   |
| <b>Protection of First-aiders</b> | Use personal protective equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |

### 5. FIRE-FIGHTING MEASURES

|                                     |  |                |             |  |
|-------------------------------------|--|----------------|-------------|--|
| <b>Flammable Properties</b>         | Not a fire hazard.   |                |             |  |
| <b>Flash Point</b>                  | Not applicable   |                |             |  |
| <b>Suitable Extinguishing Media</b> | Water spray, dry chemical, carbon dioxide (CO <sub>2</sub> ), or foam. |                |             |  |
| <b>Explosion Data</b>               |  |                |             |  |
| <b>NFPA</b>                         | Health Hazard 1  | Flammability 0 | Stability 0 | <b>Physical and Chemical Hazards</b> N/A |
| <b>HMIS</b>                         | Health Hazard 1  | Flammability 0 | Stability 0 |  |

### 6. ACCIDENTAL RELEASE MEASURES

|                                |  |
|--------------------------------|--|
| <b>Personal Precautions</b>    | Refer to Section 8.  |
| <b>Methods for Containment</b> | Sweep up in a manner that does not disperse dust and shovel into suitable containers for disposal. Dispose according to federal, state, and local regulations. |
| <b>Methods for Cleaning Up</b> | If local regulations permit, dissolve and rinse to drain with excess water. After cleaning, flush away traces with water.                                      |

## 7. HANDLING AND STORAGE

**Handling** Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not ingest. Do not eat, drink, or smoke when using this product.

**Storage** Keep containers tightly closed in a dry, cool, and well-ventilated place. Keep out of the reach of children. Keep away from direct sunlight.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| Chemical Name                                       | ACGIH TLV  | OSHA PEL   | NIOSH IDLH |
|---|--|------------|------------|
| N,N-Diethyl-p-phenylenediamine sulfate<br>6283-63-2 | None Known   | None Known | None Known |
| Polyamino carboxylic acid                           | None Known   | None Known | None Known |
| Aromatic carboxylic acid salt                       | None Known   | None Known | None Known |
| Phosphate salt                                      | None Known   | None Known | None Known |
| Boric acid<br>10043-35-3                            | = 6 mg/m <sup>3</sup> STEL<br>TWA: 2 mg/m <sup>3</sup> | None Known | None Known |
| Carboxylic acid                                     | None Known   | None Known | None Known |
| Carbonate salt                                      | None Known   | None Known | None Known |
| Potassium salt                                      | None Known   | None Known | None Known |

**Engineering Measures** None under normal use conditions.

**Personal Protective Equipment****Eye/Face Protection**

Safety glasses with side-shields. Avoid contact with eyes.

**Skin and Body Protection**

Wear latex or nitrile gloves.

**Respiratory Protection**

None required under normal usage.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                            |                          |                                 |                               |
|----------------------------|--------------------------|---------------------------------|-------------------------------|
| <b>Appearance</b>          | White                    | <b>Odor</b>                     | Odorless                      |
| <b>Physical State</b>      | Solid, Tablet            | <b>pH</b>                       | 6 (1 tablet in 10mL of water) |
| <b>Flash Point</b>         | Not applicable           | <b>Autoignition Temperature</b> | Not applicable                |
| <b>Boiling Point/Range</b> | No information available | <b>Freezing Point</b>           | No information available      |

**Explosion Limits** Not applicable

**Molecular Weight** No data available

**Water Solubility**

Soluble in water

## 10. STABILITY AND REACTIVITY

**Stability** Stable.

**Incompatible Products** None known based on information supplied.

**Conditions to Avoid** Exposure to air or moisture over prolonged periods. Direct sunlight.

**Hazardous Decomposition Products** None under normal use.

**Hazardous Polymerization** Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

**Product Information** Product does not present an acute toxicity hazard based on known or supplied information.

**LD50 Oral VALUE (mg/kg)** Oral Rat LD50: 195mg/kg for N,N-Diethyl-p-phenylenediamine sulfate

| Chemical Name                          | LD50 Oral          | LD50 Dermal           | LC50 Inhalation |
|--|--------------------|-----------------------|-----------------|
| N,N-Diethyl-p-phenylenediamine sulfate | None Known         | None Known            | None Known      |
| Polyamino carboxylic acid              | 2 g/kg ( Rat )     | None Known            | None Known      |
| Aromatic carboxylic acid salt          | None Known         | None Known            | None Known      |
| Phosphate salt                         | None Known         | 4640 mg/kg ( Rabbit ) | None Known      |
| Boric acid                             | 2660 mg/kg ( Rat ) | 2000 mg/kg ( Rabbit ) | None Known      |
| Carboxylic acid                        | 3000 mg/kg ( Rat ) | None Known            | None Known      |
| Carbonate salt                         | 1440 mg/kg ( Rat ) | 1.87 mg/kg ( Rat )    | None Known      |
| Potassium salt                         | 2600 mg/kg ( Rat ) | None Known            | None Known      |

### Chronic Toxicity

**Chronic Toxicity** May produce an allergic reaction.

| Chemical Name                          | ACGIH      | IARC       | NTP        | OSHA       |
|--|------------|------------|------------|------------|
| N,N-Diethyl-p-phenylenediamine sulfate | None Known | None Known | None Known | None Known |
| Polyamino carboxylic acid              | None Known | None Known | None Known | None Known |
| Aromatic carboxylic acid salt          | None Known | None Known | None Known | None Known |
| Phosphate salt                         | None Known | None Known | None Known | None Known |
| Boric acid                             | None Known | None Known | None Known | None Known |
| Carboxylic acid                        | None Known | None Known | None Known | None Known |
| Carbonate salt                         | None Known | None Known | None Known | None Known |
| Potassium salt                         | None Known | None Known | None Known | None Known |

| Chemical Name                          | EU - Endocrine Disruptors Candidate List | EU - Endocrine Disruptors - Evaluated Substances | Japan - Endocrine Disruptor Information |
|--|--|--|---|
| N,N-Diethyl-p-phenylenediamine sulfate | None Known                               | None Known                                       | None Known                              |
| Polyamino carboxylic acid              | None Known                               | None Known                                       | None Known                              |
| Aromatic carboxylic acid salt          | None Known                               | None Known                                       | None Known                              |
| Phosphate salt                         | None Known                               | None Known                                       | None Known                              |
| Boric acid                             | None Known                               | None Known                                       | None Known                              |
| Carboxylic acid                        | None Known                               | None Known                                       | None Known                              |
| Carbonate salt                         | None Known                               | None Known                                       | None Known                              |
| Potassium salt                         | None Known                               | None Known                                       | None Known                              |

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

No information available.

| Chemical Name                          | Toxicity to Algae     | Toxicity to Fish   | Microtox              | Daphnia Magna (Water Flea)                         |
|--|-----------------------|--|-----------------------|--|
| N,N-Diethyl-p-phenylenediamine sulfate | None Known            | None Known   | None Known            | None Known   |
| Polyamino carboxylic acid              | None Known            | LC50= 159 mg/L <i>Lepomis macrochirus</i> 96 h<br>LC50= 320 mg/L <i>Poecilia reticulata</i> 96 h | EC50 = 56 mg/L 8 h    | None Known   |
| Aromatic carboxylic acid salt          | None Known            | None Known   | None Known            | None Known   |
| Phosphate salt                         | None Known            | None Known   | None Known            | None Known   |
| Boric acid                             | None Known            | None Known   | None Known            | EC50 658 - 875 mg/L 48 h<br>EC50 = 115.0 mg/L 48 h |
| Carboxylic acid                        | None Known            | LC50= 1516 mg/L <i>Lepomis macrochirus</i> 96 h<br>LC50= 440 mg/L <i>Leuciscus idus</i> 96 h     | EC50 = 14 mg/L 15 min | EC50 = 120 mg/L 72 h                               |
| Carbonate salt                         | None Known            | None Known   | None Known            | None Known   |
| Potassium salt                         | EC50 = 2500 mg/L 72 h | LC50= 2010 mg/L <i>Lepomis macrochirus</i> 96 h  | None Known            | EC50 = 825 mg/L 48 h                               |

| Chemical Name                          | Log Pow        |
|--|----------------|
| N,N-Diethyl-p-phenylenediamine sulfate | None Known     |
| Polyamino carboxylic acid              | None Known     |
| Aromatic carboxylic acid salt          | None Known     |
| Phosphate salt                         | None Known     |
| Boric acid                             | = -0.757 25 °C |
| Carboxylic acid                        | -1.72 20 °C    |
| Carbonate salt                         | None Known     |
| Potassium salt                         | None Known     |

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Method** Dispose of in accordance with local regulations.

**Contaminated Packaging** Dispose of in accordance with local regulations.

| Chemical Name                                      | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|--|--------------------------------------|------------------------|------------------------|------------------------|
| N,N-Diethyl-p-phenylenediamine sulfate - 6283-63-2 | None Known                           | None Known             | None Known             | None Known             |
| Polyamino carboxylic acid -                        | None Known                           | None Known             | None Known             | None Known             |
| Aromatic carboxylic acid salt -                    | None Known                           | None Known             | None Known             | None Known             |
| Phosphate salt -                                   | None Known                           | None Known             | None Known             | None Known             |
| Boric acid - 10043-35-3                            | None Known                           | None Known             | None Known             | None Known             |
| Carboxylic acid -                                  | None Known                           | None Known             | None Known             | None Known             |
| Carbonate salt -                                   | None Known                           | None Known             | None Known             | None Known             |
| Potassium salt -                                   | None Known                           | None Known             | None Known             | None Known             |

**14. TRANSPORT INFORMATION**

**DOT** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

**15. REGULATORY INFORMATION**

**International Inventories**

| Component   | TSCA    | DSL | EINECS/ELINCS | ENCS              | IECSC | KECL     | PICCS | AICS |
|---|---------|-----|---------------|-------------------|-------|----------|-------|------|
| N,N-Diethyl-p-phenylenediamine sulfate<br>6283-63-2 ( 1 ) | TSCA    | DSL | X             | 3-243             | X     | KECL     | X     | X    |
| Polyamino carboxylic acid<br>( 0 - 10% )                  | Present | X   | X             | 2-1265            | X     | KE-13651 | X     | X    |
| Aromatic carboxylic acid salt<br>( 1-5 )                  | Present | X   | X             | 3-1272;<br>3-1293 | X     | KE-02710 | X     | X    |
| Phosphate salt<br>( 5-10 )                                | Present | X   | X             | 1-452             | X     | KE-28622 | X     | X    |
| Boric acid<br>10043-35-3 ( 8 )                            | Present | X   | X             | 1-63              | X     | KE-03499 | X     | X    |
| Carboxylic acid<br>( 15-25 )                              | Present | X   | X             | 2-1318            | X     | KE-20831 | X     | X    |
| Carbonate salt<br>( 20-30 )                               | Present | X   | X             | 1-153             | X     | KE-29083 | X     | X    |
| Potassium salt<br>( 25-30 )                               | Present | X   | X             | 1-228             | X     | KE-29086 | X     | X    |

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Chemical Name                          | CAS-No     | Weight % | SARA 313 - Threshold Values % |
|--|------------|----------|-------------------------------|
| N,N-Diethyl-p-phenylenediamine sulfate | 6283-63-2  | 1        | None Known                    |
| Polyamino carboxylic acid              |            | 0 - 10%  | None Known                    |
| Aromatic carboxylic acid salt          |            | 1-5      | None Known                    |
| Phosphate salt                         |            | 5-10     | None Known                    |
| Boric acid                             | 10043-35-3 | 8        | None Known                    |
| Carboxylic acid                        |            | 15-25    | None Known                    |
| Carbonate salt                         |            | 20-30    | None Known                    |
| Potassium salt                         |            | 25-30    | None Known                    |

**SARA 311/312 Hazard Categories**

|  |     |
|--|-----|
| <b>Acute Health Hazard</b>               | Yes |
| <b>Chronic Health Hazard</b>             | No  |
| <b>Fire Hazard</b>                       | No  |
| <b>Sudden Release of Pressure Hazard</b> | No  |
| <b>Reactive Hazard</b>                   | No  |

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Component   | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---|-----------------------------|------------------------|---------------------------|----------------------------|
| N,N-Diethyl-p-phenylenediamine sulfate<br>6283-63-2 ( 1 ) | None Known                  | None Known             | None Known                | None Known                 |
| Polyamino carboxylic acid<br>( 0 - 10% )                  | None Known                  | None Known             | None Known                | None Known                 |
| Aromatic carboxylic acid salt<br>( 1-5 )                  | None Known                  | None Known             | None Known                | None Known                 |

|                                |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| Phosphate salt<br>( 5-10 )     | None Known | None Known | None Known | None Known |
| Boric acid<br>10043-35-3 ( 8 ) | None Known | None Known | None Known | None Known |
| Carboxylic acid<br>( 15-25 )   | None Known | None Known | None Known | None Known |
| Carbonate salt<br>( 20-30 )    | None Known | None Known | None Known | None Known |
| Potassium salt<br>( 25-30 )    | None Known | None Known | None Known | None Known |

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

| Chemical Name                           | CAS-No     | Weight % | HAPS data  | VOC Chemicals | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|---|------------|----------|------------|---------------|-------------------------|-------------------------|
| N,N-Diethyl-p-phenylene diamine sulfate | 6283-63-2  | 1        | None Known | None Known    | None Known              | None Known              |
| Polyamino carboxylic acid               |            | 0 - 10%  | None Known | None Known    | None Known              | None Known              |
| Aromatic carboxylic acid salt           |            | 1-5      | None Known | None Known    | None Known              | None Known              |
| Phosphate salt                          |            | 5-10     | None Known | None Known    | None Known              | None Known              |
| Boric acid                              | 10043-35-3 | 8        | None Known | None Known    | None Known              | None Known              |
| Carboxylic acid                         |            | 15-25    | None Known | None Known    | None Known              | None Known              |
| Carbonate salt                          |            | 20-30    | None Known | None Known    | None Known              | None Known              |
| Potassium salt                          |            | 25-30    | None Known | None Known    | None Known              | None Known              |

**CERCLA**

| Chemical Name                          | Hazardous Substances RQs | Extremely Hazardous Substances RQs |
|--|--------------------------|------------------------------------|
| N,N-Diethyl-p-phenylenediamine sulfate | None Known               | None Known                         |
| Polyamino carboxylic acid              | None Known               | None Known                         |
| Aromatic carboxylic acid salt          | None Known               | None Known                         |
| Phosphate salt                         | None Known               | None Known                         |
| Boric acid                             | None Known               | None Known                         |
| Carboxylic acid                        | None Known               | None Known                         |
| Carbonate salt                         | None Known               | None Known                         |
| Potassium salt                         | None Known               | None Known                         |

**U.S. State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

| Chemical Name                          | CAS-No     | California Prop. 65 |
|--|------------|---------------------|
| N,N-Diethyl-p-phenylenediamine sulfate | 6283-63-2  | None Known          |
| Polyamino carboxylic acid              |            | None Known          |
| Aromatic carboxylic acid salt          |            | None Known          |
| Phosphate salt                         |            | None Known          |
| Boric acid                             | 10043-35-3 | None Known          |
| Carboxylic acid                        |            | None Known          |
| Carbonate salt                         |            | None Known          |
| Potassium salt                         |            | None Known          |

| Chemical Name                          | Massachusetts | New Jersey | Pennsylvania | Illinois   | Rhode Island |
|--|---------------|------------|--------------|------------|--------------|
| N,N-Diethyl-p-phenylenediamine sulfate | None Known    | None Known | None Known   | None Known | None Known   |
| Polyamino carboxylic acid              | None Known    | None Known | None Known   | None Known | None Known   |
| Aromatic carboxylic acid salt          | None Known    | None Known | None Known   | None Known | None Known   |
| Phosphate salt                         | None Known    | None Known | None Known   | None Known | None Known   |

|                 |            |            |            |            |            |
|-----------------|------------|------------|------------|------------|------------|
| Boric acid      | None Known | X          | None Known | None Known | None Known |
| Carboxylic acid | None Known | None Known | None Known | None Known | None Known |
| Carbonate salt  | None Known | None Known | None Known | None Known | None Known |
| Potassium salt  | None Known | None Known | None Known | None Known | None Known |

**International Regulations**

**Mexico - Grade**

| Chemical Name                          | Carcinogen Status | Exposure Limits |
|--|-------------------|-----------------|
| N,N-Diethyl-p-phenylenediamine sulfate | None Known        | None Known      |
| Polyamino carboxylic acid              | None Known        | None Known      |
| Aromatic carboxylic acid salt          | None Known        | None Known      |
| Phosphate salt                         | None Known        | None Known      |
| Boric acid                             | None Known        | None Known      |
| Carboxylic acid                        | None Known        | None Known      |
| Carbonate salt                         | None Known        | None Known      |
| Potassium salt                         | None Known        | None Known      |

**Canada**

| Component   | WHMIS Hazard Class  |
|---|---|
| N,N-Diethyl-p-phenylenediamine sulfate<br>6283-63-2 ( 1 ) | Not determined  |
| Polyamino carboxylic acid<br>( 0 - 10% )                  | Uncontrolled product according to WHMIS classification criteria |
| Aromatic carboxylic acid salt<br>( 1-5 )                  | Not determined  |
| Phosphate salt<br>( 5-10 )                                | Uncontrolled product according to WHMIS classification criteria |
| Boric acid<br>10043-35-3 ( 8 )                            | 1 %<br>D2A  |
| Carboxylic acid<br>( 15-25 )                              | 1 %<br>E  |
| Carbonate salt<br>( 20-30 )                               | 1 %<br>D2B E  |
| Potassium salt<br>( 25-30 )                               | Uncontrolled product according to WHMIS classification criteria |



**16. OTHER INFORMATION**

| NFPA | HMIS            | PPE | Transport Symbol |
|------|-----------------|-----|------------------|
|      | (Bad file name) |     |                  |

Prepared By  
 Issuing Date  
 Revision Date  
 Revision Note

Regulatory Affairs Department  
 5/18/2011  
 07-Aug-2012  
 Initial Release. (M)SDS sections updated. 3.



**Disclaimer**

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of MSDS**