Section 1: IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product identifier

Product name: DPD 1B Free Chlorine Reagent

Product Code(s): P-6741

Other means of identification

UN Number: 3265

Substance or Preparation: Preparation

Recommended use of the chemical and restrictions on use.

Recommended Use: Use as a laboratory reagent. Industrial (not for food or food contact use). Laboratory chemicals.

Uses advised against: None

Details of manufacturer or importer

LaMotte Company, Inc.
802 Washington Avenue
P.O. Box 329
Chestertown, MD 21620 USA
T 410-778-3100
F 410-778-9748

Supplier

Vendart Pty Ltd.
2/6 Bonz Place
Seven Hills, NSW 2147
T (02) 9624 8842
F (02) 9674 5115

Contact for timely inquiries in regards to this product

LaMotte Company Customer Information:

system@lamotteco.com

Vendart Pty. Ltd. Customer Information:

info@vendart.com.au

Emergency telephone numbers

24-Hour Emergency telephone number

(CHEM-TEL): USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

Local emergency telephone number

Poisons Information Center, Australia: 13 11 26
Poisons Information Center, New Zealand: 0800 764 766

Section 2: HAZARD(S) IDENTIFICATION

GHS Classification
Section 3: COMPOSITION & INFORMATION ON INGREDIENTS

Substance

Not Applicable

Mixture

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS #</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorous acid</td>
<td>13598-36-2</td>
<td>&lt;0.2</td>
</tr>
<tr>
<td>DPD Sulfate</td>
<td>6283-63-2</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Non-hazardous ingredients</td>
<td>Proprietary</td>
<td>Balance</td>
</tr>
</tbody>
</table>

Section 4: FIRST AID MEASURES

First Aid Measures

General advice

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Local emergency telephone number

Poisons Information Center, Australia: 13 11 26
Poisons Information Center, New Zealand: 0800 764 766
Inhalation
Remove to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin contact
Wash off immediately with soap and plenty of water for at least 15 minutes. Remove and isolate contaminated clothing and shoes. Wash contaminated clothing before reuse. Consult a physician if necessary.

Ingestion
Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

Self-protection of the first aider
Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Section 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
No information available.

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating gases and vapors.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters
Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Hazchem code
2X.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other Information
Refer to protective measures listed in Sections 7 and 8.

For emergency responders
Use personal protection recommended in Section 8.

Environmental precautions
See Section 12 for additional Ecological Information. Prevent further leakage or spillage if
safe to do so.

**Methods and material for containment and cleaning up**

**Methods for containment**
Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

**Methods for cleaning up**
Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water.

**Precautions to prevent secondary hazards**

**Methods for containment**
Clean contaminated objects and areas thoroughly observing environmental regulations.

---

**Section 7: HANDLING AND STORAGE, INCLUDING HOW THE CHEMICAL MAY BE SAFELY USED**

**Precautions for safe handling**

**Advice on safe handling**
Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash before reuse.

**General hygiene considerations**
Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions**
Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store away from other materials. Keep away from heat.

**Incompatible materials**

---

**Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Control parameters**

**Exposure Limits**
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorous acid</td>
<td>-</td>
</tr>
<tr>
<td>13598-36-2</td>
<td>-</td>
</tr>
<tr>
<td>DPD Sulfate</td>
<td>-</td>
</tr>
<tr>
<td>6283-63-2</td>
<td>-</td>
</tr>
</tbody>
</table>

**Appropriate engineering controls**

**Engineering controls**
Showers
Eyewash stations
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**
Safety glasses with side shields are recommended for medical or industrial exposures. If splashes are likely to occur, wear safety glasses with side-shields. Face protection shield.
Skin and body protection  
Wear suitable protective clothing. Long sleeved clothing.

Hand protection  
Wear suitable gloves. Impervious gloves. Nitrile rubber.

Respiratory protection  
No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Environmental exposure controls  
No information available.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear, colorless</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>1.4</td>
<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>-</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>No data available</td>
<td>No information available</td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>No data available</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Soluble in water</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Other Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Softening point</td>
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<td></td>
</tr>
<tr>
<td>Molecular weight</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>VOC Content (%)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Bulk density</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

Section 10: STABILITY AND REACTIVITY

Stability  
Stable under normal conditions. Stable under recommended storage conditions.

Explosion data
- Sensitivity to Mechanical Impact: None.
- Sensitivity to Static Discharge: None.

Possibility of hazardous reactions  
None under normal processing.

Hazardous polymerization  
Hazardous polymerization does not occur.

Conditions to avoid  
Exposure to air or moisture over prolonged periods.

Hazardous decomposition products: Hazardous decomposition products. Carbon oxides (COx).

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Information on likely routes of exposure

Product Information

Inhalation: Specific test data for the substance or mixture is not available.
Eye contact: Specific test data for the substance or mixture is not available.
Skin contact: Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion: Specific test data for the substance or mixture is not available.

Symptoms
No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 57,971.00 mg/kg

2.46 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
2.96 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
7.02 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
7.02 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
7.02 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component identification

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ATEmix (oral)</th>
<th>ATEmix (dermal)</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorous acid</td>
<td>= 1895 mg/kg (Rat)</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>DPD Sulfate</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
</tbody>
</table>

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation: May cause skin irritation.
Serious eye damage/eye irritation: Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.
Respiratory or skin sensitization: No information available.
Germ cell mutagenicity: No information available.
Carcinogenicity: No information available.
Reproductive toxicity: No information available.
STOT - single exposure: No information available.
STOT - repeated exposure: No information available.
Aspiration hazard: No information available.
Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Unknown aquatic toxicity 2.46% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Microtox</th>
<th>Daphnia Magna (Water Flea)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorous acid</td>
<td>Not Established</td>
<td>6980 - 9784: 96 h Brachydanio rerio mg/L LC50 static</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>DPD Sulfate</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
</tbody>
</table>

Persistence and degradability

No information available.

Bioaccumulative potential

Bioaccumulation/Accumulation No information available.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorous acid</td>
<td>Not Established</td>
</tr>
<tr>
<td>DPD Sulfate</td>
<td>Not Established</td>
</tr>
</tbody>
</table>

Mobility

Mobility in soil No information available.

Other adverse effects

No information available.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>EU - Endocrine Disrupters Candidate List</th>
<th>EU - Endocrine Disruptors - Evaluated Substances</th>
<th>Japan - Endocrine disrupting potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorous acid</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
<tr>
<td>DPD Sulfate</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
</tr>
</tbody>
</table>

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

Section 14: TRANSPORT INFORMATION

ADG

UN Number 3265
Proper shipping name CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Phosphorous Acid)
Hazard Class  8
Packing group  III
Hazchem code  2X

IATA
UN-No  3265
Proper shipping name  CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S (Phosphorous acid)
Hazard Class  8
Packing group  III

IMDG/IMO
UN-No  3265
Proper shipping name  CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S (Phosphonic acid)
Hazard Class  8
Packing group  III

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No information available

Section 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Australia
See section 8 for national exposure control parameters

Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)
No poisons schedule number allocated

International Inventories
TSCA  Complies
DSL/NDSL  Complies
EINECS/ELINCS  Complies
ENCS  Complies
IECSC  Complies
KECL  Complies
PICCS  Complies
AICS  Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

International Regulations

Ozone-depleting substances (ODS)  None known
Persistent Organic Pollutants  None known
Section 16: ANY OTHER RELEVANT INFORMATION

Prepared by Regulatory Affairs Department
Issuing Date Jan-24-2017
Revision Date Jan-24-2017

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION
TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
Ceiling Maximum limit value * Skin designation
C Carcinogen

Disclaimer
The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transporta

End of Safety Data Sheet