

# SAFETY DATA SHEET

Be Right<sup>™</sup>

Issue Date 09-Aug-2016 Revision Date 07-Nov-2016 Version 8 **Page** 1/16 **1. IDENTIFICATION** Product identifier **Product Name DPD Free Chlorine Reagent** Other means of identification Product Code(s) 1407028 M00109 Safety data sheet number HMRIC # HMIRA Registry Number 9935 Filed 2016-04-11 Recommended use of the chemical and restrictions on use **Recommended Use** Laboratory Use. Determination of Free Chlorine. Uses advised against None. **Restrictions on use** None. Details of the supplier of the safety data sheet **Manufacturer Address** Hach Company

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

#### Emergency telephone number

(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

# 2. HAZARDS IDENTIFICATION

#### Classification

**Regulatory Status** 

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| Skin corrosion/irritation         | Category 2  |
|-----------------------------------|-------------|
| Serious eye damage/eye irritation | Category 2A |

#### Hazards not otherwise classified (HNOC)

Not applicable

Label elements

#### Signal word - Warning



Product Name DPD Free Chlorine Reagent Revision Date 07-Nov-2016 Page 2 / 16

Hazard statements

H315 - Causes skin irritation H319 - Causes serious eye irritation

#### Precautionary statements

P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse

#### Other Information

Not applicable

# **3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance

Not applicable

#### <u>Mixture</u>

Chemical Family

Mixture.

#### Percent ranges are used where confidential product information is applicable.

| Chemical Name                          | CAS No    | Percent<br>Range | HMRIC # |
|--|-----------|------------------|---------|
| Sodium phosphate dibasic               | 7558-79-4 | 30 - 40%         | -       |
| Salt of N,N-Diethyl-p-Phenylenediamine | -         | 1 - 5%           | -       |
| Disodium EDTA                          | 139-33-3  | 1 - 5%           | -       |

### 4. FIRST AID MEASURES

| General advice                     | IF IN EYES: Flush eyes for at least 15 minutes. May cause skin irritation.   |
|------------------------------------|--|
| Eye contact                        | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.   |
| Skin contact                       | For minor skin contact, avoid spreading material on unaffected skin. IF ON SKIN (or hair):<br>Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.<br>Wash contaminated clothing before reuse. Remove and isolate contaminated clothing and<br>shoes. Call a POISON CENTER or doctor if you feel unwell. If skin irritation persists, call a<br>physician. |
| Inhalation                         | IF INHALED: Remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a physician.  |
| Ingestion                          | IF SWALLOWED: Rinse Mouth. If symptoms persist, call a physician.  |
| Self-protection of the first aider | Use personal protective equipment as required. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.   |
| Most important symptoms and effe   | cts, both acute and delayed  |
| Symptoms                           | See Section 11: TOXICOLOGICAL INFORMATION.   |
| Indication of any immediate medica | I attention and special treatment needed   |
| Note to physicians                 | Treat symptomatically.   |

# **5. FIRE-FIGHTING MEASURES**

#### Suitable Extinguishing Media

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

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

#### Flammable properties

Can burn in fire, releasing toxic vapors.

#### Specific hazards arising from the chemical

May react violently with oxidizers.

#### Hazardous combustion products

Carbon monoxide, Carbon dioxide. Phosphorus oxides. Nitrogen oxides.

#### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

# 6. ACCIDENTAL RELEASE MEASURES

U.S. 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.

| Product Code(s) 1407028<br>Issue Date 09-Aug-2016<br>Version 8   | Product Name DPD Free Chlorine Reagent<br>Revision Date 07-Nov-2016<br>Page 4 / 16  |  |  |
|--|---|--|--|
| EC 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.  |  |  |
| WHMIS 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.  |  |  |
| Personal precautions, protective e   | quipment and emergency procedures   |  |  |
| Personal precautions   | Evacuate personnel to safe areas. Do not touch or walk through spilled material. Ventilate affected area. Use personal protective equipment as required.  |  |  |
| For emergency responders   | Use personal protection recommended in Section 8.   |  |  |
| Environmental precautions  |   |  |  |
| Environmental precautions  | See Section 12 for additional ecological information.   |  |  |
| Methods and material for containm  | ent and cleaning up   |  |  |
| Methods for containment  | Prevent further leakage or spillage if safe to do so. Cover with plastic sheet to prevent spreading.  |  |  |
| Methods for cleaning up  | Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Dispose of in accordance with local, state and federal regulations or laws.  |  |  |
|  |   |  |  |
| Emergency Response Guide Numb  | er Not applicable   |  |  |
|  | Not applicable       7. HANDLING AND STORAGE  |  |  |
| Precautions for safe handling  |   |  |  |
|  |   |  |  |
| Precautions for safe handling  | 7. HANDLING AND STORAGE<br>Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.<br>Do not breathe dust/fume/gas/mist/vapors/spray.   |  |  |
| Precautions for safe handling<br>Advice on safe handling   | 7. HANDLING AND STORAGE<br>Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.<br>Do not breathe dust/fume/gas/mist/vapors/spray.   |  |  |
| Precautions for safe handling<br>Advice on safe handling<br>Conditions for safe storage, includ  | 7. HANDLING AND STORAGE Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray. ing any incompatibilities Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly   |  |  |
| Precautions for safe handling<br>Advice on safe handling<br><u>Conditions for safe storage, includ</u><br>Storage Conditions<br>Flammability class   | 7. HANDLING AND STORAGE Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray. ing any incompatibilities Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.   |  |  |
| Precautions for safe handling<br>Advice on safe handling<br><u>Conditions for safe storage, includ</u><br>Storage Conditions<br>Flammability class   | <b>7. HANDLING AND STORAGE</b> Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray. <b>ing any incompatibilities</b> Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.         Not applicable  |  |  |
| Precautions for safe handling<br>Advice on safe handling<br>Conditions for safe storage, includ<br>Storage Conditions<br>Flammability class<br>8. EX   | <b>7. HANDLING AND STORAGE</b> Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray. <b>ing any incompatibilities</b> Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.         Not applicable  |  |  |
| Precautions for safe handling<br>Advice on safe handling<br>Conditions for safe storage, includ<br>Storage Conditions<br>Flammability class<br><u>8. EX</u><br>Control parameters                        | <b>7. HANDLING AND STORAGE</b> Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray. <b>ing any incompatibilities</b> Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.         Not applicable <b>POSURE CONTROLS/PERSONAL PROTECTION</b> This product, as supplied, does not contain any hazardous materials with occupational   |  |  |
| Precautions for safe handling<br>Advice on safe handling<br>Conditions for safe storage, includ<br>Storage Conditions<br>Flammability class<br><b>8. EX</b><br>Control parameters<br>Exposure Guidelines | <b>7. HANDLING AND STORAGE</b> Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray. <b>ing any incompatibilities</b> Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.         Not applicable <b>POSURE CONTROLS/PERSONAL PROTECTION</b> This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |  |  |

#### Ventilation systems

# Individual protection measures, such as personal protective equipment

| Eye/face protection            | Wear tight sealing safety goggles and/or face protection shield. Avoid contact with eyes.   |  |
|--------------------------------|---|--|
| Skin and body protection       | Wear protective gloves and protective clothing.   |  |
| Respiratory protection         | In case of insufficient ventilation, wear suitable respiratory equipment.   |  |
| General Hygiene Considerations | Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.<br>Wear suitable gloves and eye/face protection. Wash face, hands and any exposed skin<br>thoroughly after handling. Regular cleaning of equipment, work area and clothing is<br>recommended. Handle in accordance with good industrial hygiene and safety practice.<br>Avoid prolonged or repeated contact with skin. Take off all contaminated clothing and wash<br>it before reuse. Do not eat, drink or smoke when using this product. Keep away from food,<br>drink and animal feeding stuffs. |  |

#### Environmental exposure controls

Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

# Information on basic physical and chemical properties

| Physical state                   |                      | Solid    |                     |                |               |                  |
|----------------------------------|----------------------|----------|---------------------|----------------|---------------|------------------|
| Gas Under Press                  | ure                  | Not clas | sified according to | o GHS criteria |               |                  |
| Appearance                       | powder               |          |                     | Color          | White to ligh | nt pink          |
| Odor                             | Odorless             |          |                     | Odor threshold | No data ava   | ilable           |
| Property_                        |                      |          | Values              |                |               | Remarks • Method |
| Molecular weight                 | :                    |          | No data availab     | le             |               |                  |
| рН                               |                      |          | 6.3                 |                |               | 1% Solution      |
| Melting point/free               | ezing point          |          | No data availab     | le             |               |                  |
| Boiling point / bo               | iling range          |          | No data availab     | le             |               |                  |
| Evaporation rate                 |                      |          | Not applicable      |                |               |                  |
| Vapor pressure                   |                      |          | Not applicable      |                |               |                  |
| Vapor density (ai                | r = 1)               |          | Not applicable      |                |               |                  |
| Specific gravity (               | water = 1 / air = 1) |          | 1.76                |                |               |                  |
| Partition Coeffici               | ent (n-octanol/wat   | er)      | No data availab     | le             |               |                  |
| Soil Organic Carl<br>Coefficient | bon-Water Partition  | n        | No data availab     | le             |               |                  |
| Autoignition tem                 | perature             |          | No data availab     | le             |               |                  |
| Decomposition to                 | emperature           |          | 110 °C / 230 °I     | F              |               |                  |
| Dynamic viscosit                 | ty                   |          | Not applicable      |                |               |                  |

**Kinematic viscosity** 

Not applicable

### Solubility(ies)

#### Water solubility

| Water solubility classification | Water solubility | Water Solubility Temperature |
|---------------------------------|------------------|------------------------------|
| Soluble                         | > 1000 mg/L      | 25 °C / 77 °F                |

#### Solubility in other solvents

| Chemical Name                        | Solubility classification | Solubility  | Solubility Temperature |  |
|--------------------------------------|---------------------------|---|------------------------|--|
| Acid Soluble                         |                           | > 1000 mg/L   | 25 °C / 77 °F          |  |
| Other Information                    |                           |   |                        |  |
| Metal Corrosivity                    |                           | Not classified as corrosive to metal according to GHS criteria      |                        |  |
| Steel Corrosion Rate                 |                           | Not applicable  |                        |  |
| Aluminum Corrosion Rate              |                           | Not applicable  |                        |  |
| Volatile Organic Compounds (         | VOC) Content              | Not applicable.   |                        |  |
| Bulk density                         |                           | No data available   |                        |  |
| -                                    |                           |   |                        |  |
| Explosive properties                 |                           | Not classified according to GHS                                     | criteria.              |  |
| Explosion data     No data available |                           |   |                        |  |
| Upper explosion limit                |                           | No data available   |                        |  |
| Lower explosion limit                |                           | No data available   |                        |  |
| Flammable properties                 |                           | Can burn in fire, releasing toxic vapors.                           |                        |  |
| Flammability Limit in Air            |                           |   |                        |  |
| Upper flammability limit:            |                           | No data available   |                        |  |
| Lower flammability limit:            |                           | No data available   |                        |  |
| Flash point                          |                           | Not applicable  |                        |  |
| Method                               |                           | No information available  |                        |  |
| Oxidizing properties                 |                           | Not classified according to GHS                                     | criteria.              |  |
| Reactivity propeties                 |                           | Not classified as self-reactive, py flammable gases in contact with |                        |  |

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# **10. STABILITY AND REACTIVITY**

# **Reactivity propeties**

Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria

Product Name DPD Free Chlorine Reagent Revision Date 07-Nov-2016 Page 7 / 16

<u>Chemical stability</u> Stable under recommended storage conditions.

Special dangers of the product None reported

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Extremes of temperature and direct sunlight. Incompatible materials.

Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

#### **Hazardous Decomposition Products**

Carbon dioxide. Carbon monoxide. Phosphorus oxides. Nitrogen oxides.

#### **Explosive properties**

Not classified according to GHS criteria.

| Upper explosion limit                                | No data available |
|--|-------------------|
| Lower explosion limit                                | No data available |
| <u>Autoignition temperature</u><br>No data available |                   |
| Sensitivity to Static Discharge                      |                   |

Sensitivity to Static D None reported

Sensitivity to Mechanical Impact None reported

**11. TOXICOLOGICAL INFORMATION** 

#### **NIOSH (RTECS) Number**

None reported

#### Information on Likely Routes of Exposure

| Product Information                         | Causes skin irritation. Causes serious eye irritation.         |  |
|---|--|--|
| Inhalation                                  | No known effect based on information supplied.                 |  |
| Eye contact                                 | Contact with eyes may cause irritation. Severely irritating to |  |
|   | eyes.  |  |
| Skin contact                                | Causes skin irritation.  |  |
| Ingestion                                   | Ingestion may cause irritation to mucous membranes.            |  |
| Aggravated Medical Conditions               | Skin disorders. Eye disorders.                                 |  |
| Toxicologically synergistic products        | None known.  |  |
| Toxicokinetics, metabolism and distribution | See ingredients information below.                             |  |

| Chemical Name    | Toxicokinetics, metabolism and distribution   |
|------------------|---|
| Sodium phosphate | Phosphates are widely utilized by cells for metabolism of proteins, fats and carbohydrates. |
| dibasic          |   |

| (30 - 40%)<br>CAS#: 7558-79-4 |   |
|-------------------------------|---|
|                               | EDTA and related compounds are poorly absorbed by the digestive system. |
| (1 - 5%)                      |   |
| CAS#: 139-33-3                |   |

#### Product Acute Toxicity Data

| Oral Exposure Route                   | No data available |
|---------------------------------------|-------------------|
| Dermal Exposure Route                 | No data available |
| Inhalation (Dust/Mist) Exposure Route | No data available |
| Inhalation (Vapor) Exposure Route     | No data available |
| Inhalation (Gas) Exposure Route       | No data available |

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

| ATEmix (ora | I) | 19,881.00 mg/kg |
|-------------|----|-----------------|

## Ingredient Acute Toxicity Data

| Oral Exposure Route  |                            |                  |                  | If available, see data below |  |  |  |
|--|----------------------------|------------------|------------------|------------------------------|--|--|--|
| Chemical Name  | Endpoint<br>type           | Reported dose    | Exposure<br>time | Toxicological effects        | Key literature references and<br>sources for data              |  |  |
| Salt of<br>N,N-Diethyl-p-Phenyl<br>enediamine<br>(1 - 5%)<br>CAS#: - | Rat<br>LD₅o                | 695 mg/kg        | None<br>reported | None reported                | No information available                                       |  |  |
| Disodium EDTA<br>(1 - 5%)<br>CAS#: 139-33-3                          | Rat<br>LD₅₀                | 2000 mg/kg       | None<br>reported | None reported                | RTECS (Registry of Toxic<br>Effects of Chemical<br>Substances) |  |  |
| Chemical Name  | Endpoint<br>type           | Reported<br>dose | Exposure<br>time | Toxicological effects        | Key literature references and<br>sources for data              |  |  |
| Sodium phosphate<br>dibasic<br>(30 - 40%)<br>CAS#: 7558-79-4         | Rat<br>LD <sub>50</sub>    | 17000 mg/kg      | None<br>reported | None reported                | RTECS (Registry of Toxic<br>Effects of Chemical<br>Substances) |  |  |
| Salt of<br>N,N-Diethyl-p-Phenyl<br>enediamine<br>(1 - 5%)<br>CAS#: - | Rat<br>LD₅₀                | 970 mg/kg        | None<br>reported | None reported                | No information available                                       |  |  |
| Disodium EDTA<br>(1 - 5%)<br>CAS#: 139-33-3                          | Rabbit<br>LD <sub>50</sub> | 2300 mg/kg       | None<br>reported | None reported                | RTECS (Registry of Toxic<br>Effects of Chemical<br>Substances) |  |  |

**Dermal Exposure Route** 

Inhalation (Dust/Mist) Exposure Route

Inhalation (Vapor) Exposure Route

Inhalation (Gas) Exposure Route

Product Skin Corrosion/Irritation Data No data available. No data available

No data available

No data available

No data available

# Ingredient Skin Corrosion/Irritation Data

If available, see data below

| Chemical Name  | Test method             | Species | Reported<br>dose | Exposure<br>time | Results                                | Key literature<br>references and<br>sources for data           |
|--|-------------------------|---------|------------------|------------------|--|--|
| Sodium phosphate<br>dibasic<br>(30 - 40%)<br>CAS#: 7558-79-4 | Standard Draize<br>Test | Rabbit  | 500 mg           | 24 hours         | Skin irritant                          | RTECS (Registry of<br>Toxic Effects of<br>Chemical Substances) |
| Disodium EDTA<br>(1 - 5%)<br>CAS#: 139-33-3                  | Standard Draize<br>Test | Rabbit  | 500 mg           | 20 hours         | Not corrosive or<br>irritating to skin | ECHA (The European<br>Chemicals Agency)                        |

# Product Serious Eye Damage/Eye Irritation Data

No data available.

# Ingredient Eye Damage/Eye Irritation Data If available, see data below

| Chemical Name  | Test method             | Species | Reported<br>dose | Exposure<br>time | Results           | Key literature<br>references and<br>sources for data           |
|--|-------------------------|---------|------------------|------------------|-------------------|--|
| Sodium phosphate<br>dibasic<br>(30 - 40%)<br>CAS#: 7558-79-4 | Standard Draize<br>Test | Rabbit  | 500 mg           | 24 hours         | Eye irritant      | RTECS (Registry of<br>Toxic Effects of<br>Chemical Substances) |
| Disodium EDTA<br>(1 - 5%)<br>CAS#: 139-33-3                  | Standard Draize<br>Test | Rabbit  | 50 mg            | None<br>reported | Mild eye irritant | ECHA (The European<br>Chemicals Agency)                        |

# **Sensitization Information**

| Product Sensitization Data               |                    |
|--|--------------------|
| Skin Sensitization Exposure Route        | No data available. |
| Respiratory Sensitization Exposure Route | No data available. |
| Ingredient Sensitization Data            |                    |
| Skin Sensitization Exposure Route        | No data available. |
| Respiratory Sensitization Exposure Route | No data available. |
| Chronic Toxicity Information             |                    |
| Product Repeat Dose Toxicity Data        |                    |
| Oral Exposure Route                      | No data available. |
| Dermal Exposure Route                    | No data available. |
| Inhalation (Dust/Mist) Exposure Route    | No data available. |
| Inhalation (Vapor) Exposure Route        | No data available. |
| Inhalation (Gas) Exposure Route          | No data available. |
| Ingredient Repeat Dose Toxicity Data     |                    |

Product Name DPD Free Chlorine Reagent Revision Date 07-Nov-2016 Page 10 / 16

| Oral Exposure Route                   | No data available |
|---------------------------------------|-------------------|
| Dermal Exposure Route                 | No data available |
| Inhalation (Dust/Mist) Exposure Route | No data available |
| Inhalation (Vapor) Exposure Route     | No data available |
| Inhalation (Gas) Exposure Route       | No data available |

| Chemical Name                        | CAS No    | ACGIH | IARC | NTP | OSHA |
|--------------------------------------|-----------|-------|------|-----|------|
| Sodium phosphate dibasic             | 7558-79-4 | -     | -    | -   | -    |
| Salt of<br>N,N-Diethyl-p-Phenylenedi | -         | -     | -    | -   | -    |
| amine                                |           |       |      |     |      |
| Disodium EDTA                        | 139-33-3  | -     | -    | -   | -    |

#### Legend

| ACGIH (American Conference of Governmental Inc            | dustrial Hygienists) | Does not apply |
|---|----------------------|----------------|
| IARC (International Agency for Research on Cance          | er)                  | Does not apply |
| NTP (National Toxicology Program)                         |                      | Does not apply |
| OSHA (Occupational Safety and Health Administra<br>Labor) | Does not apply       |                |
| Product Carcinogenicity Data                              | No data available    |                |
| Oral Exposure Route                                       | No data available    |                |
| Dermal Exposure Route                                     | No data available    |                |
| Inhalation (Dust/Mist) Exposure Route                     | No data available    |                |
| Inhalation (Vapor) Exposure Route                         | No data available    |                |
| Inhalation (Gas) Exposure Route                           | No data available    |                |
| Ingredient Carcinogenicity Data                           |                      |                |
| Oral Exposure Route                                       | No data available    |                |
| Dermal Exposure Route                                     | No data available    |                |
| Inhalation (Dust/Mist) Exposure Route                     | No data available    |                |
| Inhalation (Vapor) Exposure Route                         | No data available    |                |
| Inhalation (Gas) Exposure Route                           | No data available    |                |
| Product Germ Cell Mutagenicity invitroData                |                      |                |

No data available.

#### Ingredient Germ Cell Mutagenicity invitroData

If available, see data below

| Chemical Name | Test        | Cell Strain  | Reported<br>dose | Exposure<br>time | Results                  | Key literature<br>references and<br>sources for data |
|---------------|-------------|--------------|------------------|------------------|--------------------------|--|
| Disodium EDTA | Cytogenetic | Hamster lung | 200 mg/L         | None             | Positive test result for | RTECS (Registry                                      |

#### Product Name DPD Free Chlorine Reagent Revision Date 07-Nov-2016 Page 11 / 16

| (1 - 5%)<br>CAS#: 139-33-3        | analysis              |               |                   | reported          | mutagenicity | of Toxic Effects of<br>Chemical<br>Substances) |  |  |
|-----------------------------------|-----------------------|---------------|-------------------|-------------------|--------------|--|--|--|
| Oral Exposure Route               |                       |               | No data av        | vailable          |              |  |  |  |
| Dermal Exposure Ro                | Dermal Exposure Route |               |                   | vailable          |              |  |  |  |
| Inhalation (Dust/Mist             | ) Exposure Route      |               | No data av        | vailable          |              |  |  |  |
| Inhalation (Vapor) Ex             | posure Route          |               | No data av        | vailable          |              |  |  |  |
| Inhalation (Gas) Expo             | osure Route           |               | No data av        | vailable          |              |  |  |  |
| Ingredient Germ Cell              | Mutagenicityinviv     | <u>roData</u> |                   |                   |              |  |  |  |
| Oral Exposure Route               |                       |               | No data av        | vailable          |              |  |  |  |
| Dermal Exposure Ro                | ute                   |               | No data av        | vailable          |              |  |  |  |
| Inhalation (Dust/Mist             | ) Exposure Route      |               | No data av        | vailable          |              |  |  |  |
| Inhalation (Vapor) Ex             | posure Route          |               | No data av        | vailable          |              |  |  |  |
| Inhalation (Gas) Expo             | osure Route           |               | No data av        | vailable          |              |  |  |  |
| Oral Exposure Route               |                       |               | No data av        | vailable          |              |  |  |  |
| Dermal Exposure Ro                | ute                   |               | No data av        | vailable          |              |  |  |  |
| Inhalation (Dust/Mist             | ) Exposure Route      |               | No data av        | No data available |              |  |  |  |
| Inhalation (Vapor) Ex             | posure Route          |               | No data av        | vailable          |              |  |  |  |
| Inhalation (Gas) Expo             | osure Route           |               | No data av        | No data available |              |  |  |  |
| Ingredient Reproduct              | tive Toxicity Data    |               |                   |                   |              |  |  |  |
| Oral Exposure Route               |                       |               | No data available |                   |              |  |  |  |
| Dermal Exposure Route             |                       |               | No data available |                   |              |  |  |  |
| Inhalation (Dust/Mist             | ) Exposure Route      |               | No data available |                   |              |  |  |  |
| Inhalation (Vapor) Exposure Route |                       |               |                   | No data available |              |  |  |  |
| Inhalation (Gas) Expo             | osure Route           |               | No data av        | No data available |              |  |  |  |

# **12. ECOLOGICAL INFORMATION**

#### Ecotoxicity

Based on the classification principles, not classified as hazardous to the environment.

| Product Ecological Data |                   |
|-------------------------|-------------------|
| Aquatic toxicity        |                   |
| Fish                    | No data available |
| Crustacea               | No data available |
| Algae                   | No data available |

#### Product Name DPD Free Chlorine Reagent Revision Date 07-Nov-2016 Page 12/16

| Terrestrial toxicity       |                   |
|----------------------------|-------------------|
| Soil                       | No data available |
| Vertebrates                | No data available |
| Invertebrates              | No data available |
| Ingredient Ecological Data |                   |

# Fish

Aquatic toxicity

If available, see ingredient data below

| Chemical Name                               | Exposure<br>time | Species             | Endpoint<br>type | Reported<br>dose | Key literature references and<br>sources for data |
|---|------------------|---------------------|------------------|------------------|---|
| Disodium EDTA<br>(1 - 5%)<br>CAS#: 139-33-3 | 96 hours         | Lepomis macrochirus | LC <sub>50</sub> | 159 mg/L         | Vendor SDS  |

#### Crustacea

No data available

## ...

| Algae                                       |                  | If av         | /ailable, see i  | ngredient data b | below   |
|---|------------------|---------------|------------------|------------------|---|
| Chemical Name                               | Exposure<br>time | Species       | Endpoint<br>type | Reported<br>dose | Key literature references and<br>sources for data |
| Disodium EDTA<br>(1 - 5%)<br>CAS#: 139-33-3 | 72 Hours         | None reported | EC <sub>50</sub> | 10 mg/L          | Vendor SDS  |

#### **Terrestrial toxicity**

| Soil          | No data available |
|---------------|-------------------|
| Vertebrates   | No data available |
| Invertebrates | No data available |

**Other Information** 

Persistence and degradability None known.

#### Product Biodegradability Data No data available.

**Ingredient Biodegradability Data** No data available

**Bioaccumulation** None known.

**Product Bioaccumulation Data** 

**Ingredient Bioaccumulation Data** 

No data available

No data available.

Additional information

#### **Product Information**

#### Partition Coefficient (n-octanol/water)

No data available No data available

#### Ingredient Information

| Chemical Name   | Partition Coefficient<br>(n-octanol/water) | Method                   |
|---|--|--------------------------|
| Salt of N,N-Diethyl-p-Phenylenediamine<br>(1 - 5%)<br>CAS#: - | Partition coefficient                      | No information available |
| Disodium EDTA<br>(1 - 5%)<br>CAS#: 139-33-3                   | log K <sub>ow</sub> < 0                    | No information available |

#### <u>Mobility</u>

Mobility in soil: Moderate to high mobility. If available, see ingredient data below.

#### **Product Information**

No data available No data available

# Soil Organic Carbon-Water Partition Coefficient

#### Ingredient Information

| Chemical Name  | Soil Organic Carbon-Water Partition | Method                   |
|----------------|-------------------------------------|--------------------------|
|                | Coefficient                         |                          |
| Disodium EDTA  | log K <sub>oc</sub> < 0             | No information available |
| (1 - 5%)       |                                     |                          |
| CAS#: 139-33-3 |                                     |                          |

#### Additional information

#### Water solubility

#### **Product Information**

| Water solubility classification | Water solubility | Water Solubility Temperature |
|---------------------------------|------------------|------------------------------|
| Soluble                         | > 1000 mg/L      | 25 °C / 77 °F                |

#### Ingredient Information

| Chemical Name                                     | Water solubility<br>classification | Water solubility | Water solubility<br>temperature °C | Water solubility<br>temperature °F |
|---|------------------------------------|------------------|------------------------------------|------------------------------------|
| Sodium phosphate dibasic<br>CAS#: 7558-79-4       | Completely soluble                 | 118000 mg/L      | 20 °C                              | 68 °F                              |
| Salt of N,N-Diethyl-p-Phenylenediamine<br>CAS#: - | Completely soluble                 | > 10000 mg/L     | 25 °C                              | 77 °F                              |
| Disodium EDTA<br>CAS#: 139-33-3                   | Completely soluble                 | 100000 mg/L      | 20 °C                              | 68 °F                              |

#### Other adverse effects

No information available.

# **13. DISPOSAL CONSIDERATIONS**

Product Name DPD Free Chlorine Reagent Revision Date 07-Nov-2016 Page 13 / 16

| Product Code(s) 1407028<br>Issue Date 09-Aug-2016<br>Version 8 | Product Name DPD Free Chlorine Reagent<br>Revision Date 07-Nov-2016<br>Page 14 / 16   |
|--|---|
| Disposal of wastes   | Disposal should be in accordance with applicable regional, national, and local laws and regulations.  |
| Contaminated packaging   | Working in a well-ventilated area. Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state, or federal regulations. Dispose of empty container as normal trash. 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 in countries other than the US. Improper disposal or reuse of this container may be dangerous and illegal. Disposal should be in accordance with applicable regional, national, and local laws and regulations. |
| Special instructions for 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. Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.  |

| 14. TRANSPORT INFORMATION |                                   |
|---------------------------|-----------------------------------|
| DOT                       | Not regulated                     |
| TDG                       | Not regulated                     |
| ΙΑΤΑ                      | Not regulated                     |
| IMDG                      | Not regulated                     |
| Note:                     | No special precautions necessary. |

#### Additional information

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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 reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

# **15. REGULATORY INFORMATION**

| National Inventories |          |
|----------------------|----------|
| TSCA                 | Complies |
| DSL/NDSL             | Complies |

**TSCA**- United States Toxic Substances Control Act Section 8(b) Inventory **DSL/NDSL**- Canadian Domestic Substances List/Non-Domestic Substances List

| International Inventories |          |
|---------------------------|----------|
| EINECS/ELINCS             | Complies |
| ENCS                      | Complies |
| IECSC                     | Complies |
| KECL                      | Complies |
| PICCS                     | Complies |
| TCSI                      | Complies |
| AICS                      | Complies |
| NZIoC                     | Complies |
|                           |          |

**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 **TCSI**- Taiwan Chemical Substances Inventory **AICS**- Australian Inventory of Chemical Substances **NZIoC**- New Zealand Inventory of Chemicals

#### US 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

| SARA 311/312 Hazard Categories    |     |
|-----------------------------------|-----|
| Acute health hazard               | Yes |
| Chronic Health Hazard             | No  |
| Fire hazard                       | No  |
| Sudden release of pressure hazard | No  |
| Reactive Hazard                   | No  |

#### CWA (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)

| Chemical Name                            | CWA - Reportable<br>Quantities | CWA - Toxic Pollutants | CWA - Priority<br>Pollutants | CWA - Hazardous<br>Substances |
|--|--------------------------------|------------------------|------------------------------|-------------------------------|
| Sodium phosphate<br>dibasic<br>7558-79-4 | 5000 lb                        | -                      | -                            | Х                             |

#### CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical Name            | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) |
|--------------------------|--------------------------|----------------|--------------------------|
| Sodium phosphate dibasic | 5000 lb                  | -              | RQ 5000 lb final RQ      |
| 7558-79-4                |                          |                | RQ 2270 kg final RQ      |

#### US State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals

New Jersey Trade Secret Registry Number 80100131-5001 (Carboxylate Salt) New Jersey Trade Secret Registry Number 80100131-5002 (DPD Salt) New York Trade Secret Registry Number 478 (DPD Salt) New York Trade Secret Registry Number 479 (Carboxylate Salt) This product complies with Pennsylvania Trade Secret Regulations. This product is registered as a trade secret in the state of Illinois. This product is registered as a trade secret in the state of Massachusetts. This product is registered as a trade secret in the state of New York.

#### U.S. State Right-to-Know Regulations

| Chemical Name            | New Jersey | Massachusetts | Pennsylvania |
|--------------------------|------------|---------------|--------------|
| Sodium phosphate dibasic | Х          | Х             | Х            |
| 7558-79-4                |            |               |              |

#### U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

# **16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

#### NFPA and HMIS Classifications

| NFPA | Health hazards - 2 | Flammability - 0 | Instability - 0      | Physical and Chemical<br>Properties -                              |
|------|--------------------|------------------|----------------------|--|
| HMIS | Health hazards - 2 | Flammability - 0 | Physical hazards - 0 | Personal protection - X<br>- See section 8 for more<br>information |

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

| NIOSH IDLH | Immediately Dangerous to Life or Health                           |
|------------|---|
| ACGIH      | ACGIH (American Conference of Governmental Industrial Hygienists) |
| NDF        | no data   |

#### Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| TWA                    | TWA (time-weighted average)                                     |                                    | STEL            | STEL (Short Term Exposure Limit)  |
|------------------------|---|------------------------------------|-----------------|---|
| MAC                    | Maximum Allowable Concentration                                 |                                    | Ceiling         | Ceiling Limit Value   |
| Х                      | Listed  |                                    | Vacated         | These values have no official status. The only<br>binding levels of contaminants are those<br>listed in the final OSHA PEL. These lists are<br>for reference purposes only. Please note that<br>some reference state regulations of these<br>"liberated" exposure limits in their state<br>regulations. |
| SKN*<br>RSP+<br>C<br>M | Skin designation<br>Respiratory sensit<br>Carcinogen<br>mutagen | tization                           | SKN+<br>**<br>R | Skin sensitization<br>Hazard Designation<br>Reproductive toxicant   |
| Prepared By            |   | Hach Product Compliance Department |                 |   |
| Issue Date             |   | 09-Aug-2016                        |                 |   |
| Revision Date          |   | 07-Nov-2016                        |                 |   |
| <b>Revision Note</b>   |   | None                               |                 |   |
|                        |   |                                    |                 |   |

<u>Disclaimer</u>

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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