

Revision Date 25-Jul-2022

Revision Number 2

NGHS / English

horizon

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## 1. IDENTIFICATION

### Product identifier

**Product Name** 5X Buffer Solution

### Other means of identification

**Product Code(s)** B-002000-UB-100

### Recommended use of the chemical and restrictions on use

**Recommended Use** Laboratory chemicals

**Restrictions on use** No information available

### Details of the supplier of the safety data sheet

**Supplier Identification** Dharmacon Inc.  
Horizon Discovery Ltd.

**Address** 2560 Crescent Drive Suite 100  
Lafayette, Co 80026

**Telephone** Tel: (303)-604-9499  
Fax: (303)-604-9680

**E-mail** technical@horizondiscovery.com

### Emergency telephone number

**Company Emergency Phone Number** Chemtrec International: 1-703-741-5970

## 2. HAZARDS IDENTIFICATION

### Classification

The product contains no substances which at their given concentration, are considered to be hazardous to health

**Appearance** Clear

**Physical state** Liquid

**Odor** No information available

GHS Label elements, including precautionary statements

## Hazard statements

Other information**3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance

| Chemical name      | CAS-No    | Weight-% | Hazardous Material Information Review Act registry number (HMIRA registry #) | Date HMIRA filed and date exemption granted (if applicable) |
|--------------------|-----------|----------|--|---|
| Water              | 7732-18-5 | 20-50%   | -  | -   |
| Potassium Chloride | 7447-40-7 | 0-20%    | -  | -   |
| Magnesium Chloride | 7786-30-3 | 0-5%     | -  | -   |
| HEPES              | 7365-45-9 | 0-10%    | -  | -   |

**4. FIRST AID MEASURES**First aid measures

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Remove to fresh air.   |
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| <b>Skin contact</b> | Wash off immediately with plenty of water for at least 15 minutes.   |
| <b>Ingestion</b>    | DO NOT induce vomiting.  |

Most important symptoms and effects, both acute and delayed

|                 |                           |
|-----------------|---------------------------|
| <b>Symptoms</b> | No information available. |
|-----------------|---------------------------|

Indication of any immediate medical attention and special treatment needed

|                           |                        |
|---------------------------|------------------------|
| <b>Note to physicians</b> | Treat symptomatically. |
|---------------------------|------------------------|

**5. FIRE-FIGHTING MEASURES**

|                                       |   |
|---------------------------------------|---|
| <b>Suitable Extinguishing Media</b>   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| <b>Large Fire</b>                     | CAUTION: Use of water spray when fighting fire may be inefficient.                                      |
| <b>Unsuitable extinguishing media</b> | Do not scatter spilled material with high pressure water streams.                                       |

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|   |  |
|---|--|
| <b>Specific hazards arising from the chemical</b>     | No information available.  |
| <b>Hazardous Combustion Products</b>                  | None.  |
| <b>Explosion Data</b>                                 |  |
| <b>Sensitivity to Mechanical Impact</b>               | None.  |
| <b>Sensitivity to Static Discharge</b>                | None.  |
| <b>Special protective equipment for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Ensure adequate ventilation. Use personal protective equipment as required.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. EXPOSURE CONTROLS/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.

### Appropriate engineering controls

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

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

|                                       |  |
|---------------------------------------|--|
| <b>Eye/face protection</b>            | Wear safety glasses with side shields (or goggles).  |
| <b>Hand protection</b>                | Protective gloves.   |
| <b>Skin and body protection</b>       | Wear suitable protective clothing.   |
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| <b>General hygiene considerations</b> | Handle in accordance with good industrial hygiene and safety practice.   |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and Chemical Properties

|                       |                          |
|-----------------------|--------------------------|
| <b>Physical state</b> | Liquid                   |
| <b>Appearance</b>     | Clear                    |
| <b>Odor</b>           | No information available |
| <b>Color</b>          | No information available |
| <b>Odor Threshold</b> | No information available |

| <u>Property</u>                               | <u>Values</u>     | <u>Remarks Method</u> |
|---|-------------------|-----------------------|
| <b>pH</b>                                     | No data available | None known            |
| <b>Melting / freezing point</b>               | No data available | None known            |
| <b>Boiling point / boiling range</b>          | No data available | None known            |
| <b>Flash Point</b>                            | No data available | None known            |
| <b>Evaporation Rate</b>                       | No data available | None known            |
| <b>Flammability (solid, gas)</b>              | No data available | None known            |
| <b>Flammability Limit in Air</b>              |                   | None known            |
| <b>Upper flammability limit</b>               | No data available |                       |
| <b>Lower flammability limit</b>               | No data available |                       |
| <b>Vapor pressure</b>                         | No data available | None known            |
| <b>Vapor density</b>                          | No data available | None known            |
| <b>Relative density</b>                       | No data available | None known            |
| <b>Water Solubility</b>                       | Soluble in water  | None known            |
| <b>Solubility(ies)</b>                        | No data available | None known            |
| <b>Partition coefficient: n-octanol/water</b> | No data available | None known            |
| <b>Autoignition temperature</b>               | No data available | None known            |
| <b>Decomposition temperature</b>              | No data available | None known            |
| <b>Kinematic viscosity</b>                    | No data available | None known            |
| <b>Dynamic viscosity</b>                      | No data available | None known            |

### Other Information

|                                   |                          |
|-----------------------------------|--------------------------|
| <b>Explosive properties</b>       | No information available |
| <b>Oxidizing properties</b>       | No information available |
| <b>Softening Point</b>            | No information available |
| <b>Molecular Weight</b>           | No information available |
| <b>VOC Content (%)</b>            | No information available |
| <b>Liquid Density</b>             | No information available |
| <b>Bulk Density</b>               | No information available |
| <b>Particle Size</b>              | No information available |
| <b>Particle Size Distribution</b> | No information available |

## 10. STABILITY AND REACTIVITY

|                           |                                 |
|---------------------------|---------------------------------|
| <b>Reactivity</b>         | No information available.       |
| <b>Chemical stability</b> | Stable under normal conditions. |

|   |   |
|---|---|
| <b>Possibility of Hazardous Reactions</b> | None under normal processing.             |
| <b>Hazardous Polymerization</b>           | Hazardous polymerization does not occur.  |
| <b>Conditions to avoid</b>                | Incompatible materials.                   |
| <b>Incompatible materials</b>             | Strong oxidizing agents.                  |
| <b>Hazardous Decomposition Products</b>   | None known based on information supplied. |

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available. |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. |
| <b>Ingestion</b>    | Specific test data for the substance or mixture is not available. |

### Information on toxicological effects

**Symptoms** No information available.

### Numerical measures of toxicity

#### Acute Toxicity

**Unknown acute toxicity** No information available

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

|  |                           |
|--|---------------------------|
| <b>Skin corrosion/irritation</b>         | No information available. |
| <b>Serious eye damage/eye irritation</b> | No information available. |
| <b>Respiratory or skin sensitization</b> | No information available. |
| <b>Germ cell mutagenicity</b>            | No information available. |
| <b>Carcinogenicity</b>                   | No information available. |
| <b>Reproductive toxicity</b>             | No information available. |
| <b>STOT - single exposure</b>            | No information available. |
| <b>STOT - repeated exposure</b>          | No information available. |

Aspiration hazard No information available.

## 12. ECOLOGICAL INFORMATION

Ecotoxicity The environmental impact of this product has not been fully investigated.

Persistence and Degradability No information available.

Bioaccumulation There is no data for this product.

Mobility No information available.

Other adverse effects No information available.

## 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.

## 14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA Not regulated

IMDG Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated

## 15. REGULATORY INFORMATION

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

**International Regulations**

**Ozone-depleting substances (ODS)** Not applicable

**Persistent Organic Pollutants** Not applicable

**Export Notification requirements** Not applicable

**International Inventories**

|                      |   |
|----------------------|---|
| <b>TSCA</b>          | Contact supplier for inventory compliance status. |
| <b>DSL/NDSL</b>      | Contact supplier for inventory compliance status. |
| <b>EINECS/ELINCS</b> | Contact supplier for inventory compliance status. |
| <b>ENCS</b>          | Contact supplier for inventory compliance status. |
| <b>KECL</b>          | Contact supplier for inventory compliance status. |
| <b>PICCS</b>         | Contact supplier for inventory compliance status. |
| <b>AICS</b>          | Contact supplier for inventory compliance status. |

**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

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**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**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

**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)

**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

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

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

This product does not contain any substances above threshold limits that are regulated by state right-to-know.

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**16. OTHER INFORMATION**

|                    |                         |                       |                           |   |
|--------------------|-------------------------|-----------------------|---------------------------|---|
| <b><u>NFPA</u></b> | <b>Health hazards</b> 1 | <b>Flammability</b> 0 | <b>Instability</b> 0      | <b>Physical and Chemical Properties -</b> |
| <b><u>HMIS</u></b> | <b>Health hazards</b> 0 | <b>Flammability</b> 0 | <b>Physical hazards</b> 0 | <b>Personal Protection</b> X              |

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**Issuing Date** null

**Revision Date** 21-Nov-2019

**Revision Note** No information available

**Disclaimer**

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**End of Safety Data Sheet**