1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY INFORMATION

Catalog Number: 76671

Product name: ES 7X® LABORATORY DETERGENT

Synonyms: 7X ES; 7X PF

Supplier: MP Biomedicals, LLC
29525 Fountain Parkway
Solon, OH 44139
tel: 440-337-1200

Emergency telephone number: CHEMTREC: 1-800-424-9300 (1-703-527-3887)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Weight %</th>
<th>ACGIH Exposure Limits</th>
<th>OSHA Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER</td>
<td>7732-18-5</td>
<td>80 - 90%</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Pentamethylenephosphonate</td>
<td>22042-96-2</td>
<td>10 - 20%</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>heptasodium</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIOCTYL SULFOSUCCINATE SODIUM</td>
<td>577-11-7</td>
<td>1 - 5%</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>SALT</td>
<td>112-34-5</td>
<td>1 - 5%</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Glycol Ether</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Irritating to eyes

Category of Danger: Irritant

Principle routes of exposure: Skin

Inhalation: May cause irritation of respiratory tract

Ingestion: May be harmful if swallowed.

Skin contact: May cause allergic skin reaction

Eye contact: Moderately irritating to the eyes

ANSI Classification Irritant - eye, mild

Statements of hazard CAUSES EYE IRRITATION.

Statement of Spill or Leak - ANSI Label Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment.

Statement of First Aid In case of contact, immediately flush eyes with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Call a physician. If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call a physician. In case of contact, flush eyes with running water for at least 15 minutes. Consult a physician for irritation or any other symptom.
4. FIRST AID MEASURES

General advice: In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Inhalation: Move to fresh air. Call a physician immediately.
Skin contact: Rinse immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Call a physician immediately. Consult a physician if necessary.
Ingestion: If swallowed, seek medical advice immediately and show this container or label. Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician.
Eye contact: Flush eye(s) immediately with plenty of water. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Rinse immediately with plenty of water, also under the eyelids. Call a physician immediately. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. If symptoms persist, call a physician.
Protection of first-aiders: No information available.
Medical conditions aggravated by exposure: None known.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Use dry chemical, CO2, water spray or "alcohol" foam. Use media appropriate for the surrounding fire.
Specific hazards: Burning produces irritant fumes.
Unusual hazards: None known.
Special protective equipment for firefighters: Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire and/or explosion do not breathe fumes.
Specific methods: Water mist may be used to cool closed containers.
Flash point: Not determined.
Autoignition temperature: Not determined.
NFPA rating:
- NFPA Health: 0
- NFPA Flammability: 0
- NFPA Reactivity: 0

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Remove all sources of ignition.
Environmental precautions: Do not flush into surface water or sanitary sewer system.
Methods for cleaning up: Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Storage: ROOM TEMPERATURE
Handling: Use only in area provided with appropriate exhaust ventilation.
Safe handling advice: Wear personal protective equipment. Remove and wash contaminated clothing before reuse.
Technical measures/storage conditions: Keep containers tightly closed in a cool, well-ventilated place.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: Ensure adequate ventilation, especially in confined areas.
PERSONAL PROTECTIVE EQUIPMENT
Respiratory protection: In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
Hand protection: PVC or other plastic material gloves
Skin and body protection: Impervious clothing Long sleeved clothing
Eye protection: If splashes are likely to occur, wear: Goggles Safety glasses with side-shields
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor
Tan to yellowish-grey, Hazy
Physical state: Liquid
Formula: Not applicable
Melting point/range: No data available at this time.
Boiling point/range: No Data available at this time.
Density: No data available
Vapor pressure: No data available
Evaporation rate: No data available
Vapor density: No data available
Solubility (in water): Soluble
Flash point: Not determined
Autoignition temperature: Not determined

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.
Polymerization: None under normal processing.
Hazardous decomposition products: Thermal decomposition can lead to release of irritating gases and vapours such as carbon oxides.
Materials to avoid: Strong oxidising agents
Conditions to avoid: Exposure to air or moisture over prolonged periods.

11. TOXICOLOGICAL INFORMATION

Product Information
Acute toxicity
Components
WATER
Pentamethylenephosphonate heptasodium
DIOCTYL SULFOSUCCINATE SODIUM SALT
Glycol Ether
RTECS Number: ZC0110000 Not Available
Selected LD50s and LC50s
Oral LD50 Rat = > 90 ml/kg
Oral LD50 Rat : >5 gm/kg
Dermal LD50 Rabbit : >5 gm/kg
Oral LD50 Rat : 1900 mg/kg
Oral LD50 Mouse : 2643 mg/kg
Oral LD50 Rat : 5660 mg/kg
Oral LD50 Mouse : 2400 mg/kg
Dermal LD50 Rabbit : 2700 mg/kg

Chronic toxicity:
Chronic exposure may cause nausea and vomiting, higher exposure causes unconsciousness.

Catalog Number: 76671
Product name: ES 7X® LABORATORY DETERGENT
Local effects: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Specific effects: May include moderate to severe erythema (redness) and moderate edema (raised skin), nausea, vomiting, headache.
Primary irritation: No data is available on the product itself.
Carcinogenic effects: No data is available on the product itself.
Mutagenic effects: No data is available on the product itself.
Reproductive toxicity: No data is available on the product itself.

12. ECOLOGICAL INFORMATION

Mobility: No data available
Bioaccumulation: No data available
Ecotoxicity effects: May cause long-term adverse effects in the aquatic environment.

Components

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentamethylenephosphonate heptasodium</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>DIOCTYL SULFOSUCCINATE SODIUM SALT</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Glycol Ether</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

Components

<table>
<thead>
<tr>
<th>WATER</th>
<th>Germany VCI (WGK)</th>
<th>World Health Organization (WHO) - Drinking Water</th>
<th>Ecotoxicity - Fish Species Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentamethylenephosphonate heptasodium</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>DIOCTYL SULFOSUCCINATE SODIUM SALT</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>LC50 (96 hr) rainbow trout: &gt;180 mg/L, &lt;252 mg/L; LC50 (96 hr) bluegill sunfish: 758 mg/L: Not Listed</td>
</tr>
<tr>
<td>Glycol Ether</td>
<td>1</td>
<td>Not Listed</td>
<td>LC50 (96 hr) bluegill: 1300 mg/L; Cond: Static, 23 °C; LC50 (24 hr) goldfish: 2700 mg/L:</td>
</tr>
</tbody>
</table>

Components

<table>
<thead>
<tr>
<th>WATER</th>
<th>Ecotoxicity - Freshwater Algae Data</th>
<th>Ecotoxicity - Microtox Data</th>
<th>Ecotoxicity - Water Flea Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentamethylenephosphonate heptasodium</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>DIOCTYL SULFOSUCCINATE SODIUM SALT</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>EC50 (48 hr) water flea: 242 mg/L: Not Listed</td>
</tr>
<tr>
<td>Glycol Ether</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>LC50 (24 hr) water flea: 2850 mg/L:</td>
</tr>
</tbody>
</table>
13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous.

Contaminated packaging:
Do not re-use empty containers

Methods for cleaning up:
Soak up with inert absorbent material.

14. TRANSPORT INFORMATION

UN/Id No:
Not regulated

DOT:
Proper shipping name:
Not Regulated

U.S. DOT - Appendix A Table 1 - Reportable Quantities

Components
WATER
Pentamethylenephosphonate heptasodium
DIOCTYL SULFOSUCCINATE SODIUM SALT
Glycol Ether

RQ = 1 pound (as glycol ethers)

TDG (Canada):
WHMIS hazard class:
Non-controlled

IMDG/IMO

IMDG - Hazard Classifications
Not Applicable
Components

WATER
Not Listed

Pentamethylenephosphonate heptasodium
Not Listed

DIOCTYL SULFOSUCCINATE SODIUM SALT
Not Listed

Glycol Ether
Not Listed

IMO-labels:

15. REGULATORY INFORMATION

International Inventories

Components

WATER
Inventory - United States TSCA - Sect. 8(b) Present
Canada DSL Inventory List - Present
Australia (AICS): Present
Inventory - China: Present
EU EINECS List - 231-791-2; H2O
Korean KECL: KE-35400
Philippines PICCS: Present

Components

Pentamethylenephosphonate heptasodium
Inventory - United States TSCA - Sect. 8(b) Present
Canada DSL Inventory List - Present
Australia (AICS): Present
Inventory - China: Present
EU EINECS List - 244-751-4; C9H28N3O15P5.xNa
Korean KECL:KE-28512
Philippines PICCS: Present

Components

DIOCTYL SULFOSUCCINATE SODIUM SALT
Inventory - United States TSCA - Sect. 8(b) Present
Canada DSL Inventory List - Present
Australia (AICS): Present
Inventory - China: Present
EU EINECS List - 209-406-4; C20H38O7S.Na
Inventory - Japan: 2-1623
Korean KECL: KE-32402
Philippines PICCS: Present

Components

Glycol Ether
Inventory - United States TSCA - Sect. 8(b) Present
Canada DSL Inventory List - Present
Australia (AICS): Present
Inventory - China: Present
EU EINECS List - 203-961-6; C8H18O3
Inventory - Japan: 2-422; 7-97
Korean KECL: KE-10466
Philippines PICCS: Present
16. OTHER INFORMATION

Prepared by: Health & Safety
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End of Safety Data Sheet