SAFETY DATA SHEET

1. Product and Company Identification

Red Emergency Flare – No Perchlorate (NPC) Identification: The NPC Flare will have the following symbol on it.

Formulation

Synonyms: Emergency Road Flare, Railway Flare

NSN#: 1370-01-009-2593

Identified Use: Emergency signal Use Advised Against: Do not use indoors or inside of a vehicle.

Manufacturer’s Information: Orion Safety Products

3157 N 500 W

Peru, Indiana 46970

US 1-800-851-5260

Int’l (11) 1-765-472-4375

2. Hazards Identification

GHS Classifications

Explosive Category 1.4
Skin Irritation Category 2
Eye Irritation Category 2A
STOT-Single Exposure Category 3

GHS Label Elements

Hazard Statements

H204 Fire or projection hazard
H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Precautionary Statements

P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.
P201 Keep away from heat, sparks, open flames, hot surfaces.
P204 Wear protective eye protection.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors.
P280 Wear protective eye protection.
P370 In case of fire use water deluge.

Pictograms

Signal Word Warning

IF SWALLOWED: Get immediate medical advice /attention.
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove to fresh air. Watch for signs of allergic reaction. If other symptoms develop, get medical aid immediately.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Dispose of contents / container in accordance with local and national regulations.

3. Composition / Information on Ingredients

Component CAS # EINCS # Percentage

Strontium Nitrate 10042-76-9 233-131-6 <75%
Sulfur 7704-34-9 231-722-6 <25%
Potassium Nitrate 7757-79-1 231-818-8 <25%
Paraffinic Oil 64742-54-7 232-384-2 <10%
Potassium Chlorate 3811-04-9 231-100-4 <5%
Sawdust (cellulose) 9004-34-6 232-674-9 <5%
Polyvinyl Chloride 9002-86-2 200-831-0 <5%
Charcoal 1333-86-4 231-153-3 <1%

Note: Due to Confidential Business Information, “Trade Secrets”, the exact percentage of each ingredient has not been disclosed.

CBI information will be shared with appropriate authorities if circumstances warrant.

4. First Aid Measures

Description of first aid measures

Inhalation: If contents are inhaled, remove to fresh air. Watch for signs of allergic reaction. If other symptoms develop, get medical aid immediately.

Skin: If contents are contacted, wash with area with soap and water for 15 minutes. Remove contaminated clothing and wash before reuse. Get medical aid if irritation occurs.

Eyes: If contents get into eyes, flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses if easily possible. Get medical aid immediately.

Ingestion: Get medical aid immediately.
5. Firefighting Measures

Extinguishing Media
Water deluge

Unsuitable Extinguishing Media
Foam and dry chemical extinguishers and suffocation are ineffective.

Protective Equipment and Precautions for Firefighters
Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Prevent further propagation of fire by spraying unburnt nearby product with water. Combat fire from a sheltered position. Use copious amounts of water to extinguish fire comprised of flares. Flares contain oxidizers and will continue to burn unless a significant amount of water is used. Do not breathe smoke.

Specific Hazards Arising from the Chemical
Only use outdoors. Flame and sparks are ejected out the open end of the flare when it functions. Do not point flare at any part of the body or flammable material.

Further Information
No data available

6. Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures
Do not breathe smoke or contents. Avoid contact with skin and eyes. Wear flame retardant clothing with long sleeves, dust mask, rubber or nitrile gloves, safety goggles, safety shoes when cleaning up contents. Avoid friction on the released product. Keep away from ignition sources.

Environmental Precautions
Prevent dispersion of contents on soil and in water. Prevent contents from spreading or entering into drains, ditches, groundwater or rivers by using appropriate barriers.

Methods for Containment and Clean-up
Use caution when cleaning up spilled contents. Remove heat, flames, sparks and other sources of ignition. Use non-sparking tools and equipment. Prevent buildup of electrostatic charges by grounding. Clean spills in a manner that does not disperse dust into the air. Do not absorb in sawdust or other combustible absorbents. Pick up spill for recovery or disposal and place in an approved container. Wash away remainder with plenty of water. Collect wash water for approved disposal.

7. Handling and Storage

Precautions for Safe Handling
Hold and point flare away from body when igniting. Exercise caution when using the product since molten flecks may be emitted. Produces hot flame. Burning flare can cause severe burns if in contact with body. Avoid contact with clothing and other combustible materials. Wear eye protection during use. Follow instructions on package. Use outdoors only! Do no ignite or burn product inside a vehicle or building. Avoid inhalation of smoke. Do not disassemble. Do not allow contents to touch eyes, skin or clothing. Do not ingest contents as they may be harmful if swallowed. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with heat, sparks, and flame.

Conditions for Safe Storage, Including Any Incompatibilities
Store in a dry place away from direct sunlight, heat and incompatible materials. See section 10. Store away from food and beverages. Store away from flammable materials, sources of heat, flame and sparks. Store at ambient temperature. Do not store partially burned signals in a vehicle, warehouse, or any other building. Plastic bags are provided for moisture protection. Keep partially used bags sealed at all times.

8. Exposure Controls / Personal Protection

Control Parameters

<table>
<thead>
<tr>
<th>Exposure Limits</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strontium Nitrate</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Sulfur</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Potassium Nitrate</td>
<td>Nuisance dust, 15 mg/m³</td>
<td>Nuisance dust, 15 mg/m³</td>
</tr>
<tr>
<td>Paraffinic Oil</td>
<td>5 mg/m³</td>
<td>5 mg/m³ &quot;T.W.A&quot;</td>
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<tr>
<td>Potassium Chlorate</td>
<td>No Airborne Exposure Limits established</td>
<td>No Airborne Exposure Limits established</td>
</tr>
<tr>
<td>Sawdust (cellulose)</td>
<td>5 mg/m³</td>
<td>10 mg/m³</td>
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<tr>
<td>Polyvinyl Chloride</td>
<td>No known hazardous components above regulatory thresholds in this product.</td>
<td>No known hazardous components above regulatory thresholds in this product.</td>
</tr>
<tr>
<td>Charcoal</td>
<td>Nuisance dust, 15 mg/m³</td>
<td>Nuisance dust, 15 mg/m³</td>
</tr>
</tbody>
</table>

Exposure ContROLS

Engineering Controls
Use product outdoors only! When cleaning up contents, use local and/or general exhaust.

Eye / Face Protection
Safety glasses or goggles

Skin Protection
None under normal conditions when using product unless prolonged handling is anticipated. Impervious protective clothing, including gloves, boots, and a lab coat, apron or coveralls, as appropriate, when cleaning up spilled product.

Respiratory Protection
None under normal conditions when using product. A particulate respirator (NIOSH Type N95 or better filters) may be worn during the cleanup of spilled contents.

General Hygiene
Use product outdoors away from combustible products. For cleanup of spilled contents, emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of hazardous materials. Maintain good housekeeping and safety practices. Do not let contents accumulate in storage or work areas. Clean spills up promptly.

See section 2 labeling and section 11
Burning flare can cause severe burns if in contact with body. For burns to skin, cool with water and bandage appropriately. Seek medical attention. If eye is burned, cover eye and get medical aid immediately.
9. Physical and Chemical Properties

**Appearance** (color, physical form, shape): Grey powder

**pH:** No data available  
**Melting Point:** No data available  
**Freezing Point:** No data available  
**Specific Gravity:** No data available  
**Odor:** No data available  
**Odor Threshold:** No data available  
**Flammability:** No data available  
**Flammability Limits:** No data available  
**Partition Coefficient:** No data available  
**Viscosity:** No data available

**Solubility:** No data available  
**Evaporation Rate:** No data available  
**Vapor Density:** No data available  
**Flash Point:** No data available  
**Relative Density:** No data available

**Decomposition Temperature:** No data available

10. Stability and Reactivity

**Chemical Stability:** Stable  
**Reactivity:** No information available  
**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid**

Combustible materials, heat, flames, sparks and other sources of ignition. Moisture.

**Incompatible Materials**

Strong acids, strong fuels, ammonia salts and strong bases. Strong oxidizers; chloride salts.

**Hazardous Decomposition Products**

Carbon monoxide, carbon dioxide, sulfur oxides and nitrogen oxides.

11. Toxicology Information

**Ingredient acute toxicity information**

<table>
<thead>
<tr>
<th>Toxicology</th>
<th>Oral LD50</th>
<th>Skin LD50</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strontium Nitrate</td>
<td>Rat: 2750 mg/kg</td>
<td>No information found</td>
<td>No data available</td>
</tr>
<tr>
<td>Sulfur</td>
<td>Rat: &gt;2000 mg/kg</td>
<td>Rat: &gt;2000 mg/kg</td>
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</tr>
<tr>
<td>Potassium Nitrate</td>
<td>Rat: 3750 mg/kg</td>
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<td>No data available</td>
</tr>
<tr>
<td>Paraffinic Oil</td>
<td>Rat: &gt;2000 mg/kg</td>
<td>Rat: &gt;2000 mg/kg</td>
<td>No data available</td>
</tr>
<tr>
<td>Potassium Chlorate</td>
<td>Rat: 1870 mg/kg</td>
<td>Rabbit: &gt;2000 mg/kg</td>
<td>No data available</td>
</tr>
<tr>
<td>Sawdust (cellulose)</td>
<td>Rat: &gt; 5000 mg/kg</td>
<td>Rabbit: &gt;2000 mg/kg</td>
<td>Rat 758 mg/m³</td>
</tr>
<tr>
<td>Polyvinyl Chloride</td>
<td>Rat: &gt; 5000 mg/kg</td>
<td>no known hazardous components above</td>
<td>No information found</td>
</tr>
<tr>
<td>Charcoal</td>
<td>Rat: &gt; 15400 mg/kg</td>
<td>Rabbit: 3 g/kg</td>
<td>No information found</td>
</tr>
</tbody>
</table>

**Product toxicological information**

**Acute Toxicity**

Not classified – Acute Toxicity Estimate yields oral LD₅₀ over 5000 mg/kg bw

**Skin Irritation / Corrosion**

Category 2 – over 10% of ingredients classified as a Category 2 skin irritant

**Serious Eye Damage / Irritation**

Category 2A – over 10% of ingredients classified as a Category 2A eye irritant

**Respiratory / Skin Sensitization**

Not classified (Based on available data, the classification criteria are not met)

**Germ Cell Mutagen**

Not classified (Based on available data, the classification criteria are not met)

**Carcinogen**

Not classified (Based on available data, the classification criteria are not met)

**Reproductive Toxicity**

Not classified (Based on available data, the classification criteria are not met)

**STOT – single exposure**

Category 3 - respiratory-over 10% of ingredients classified as a Category 3 respiratory STOT hazard

**STOT – repeated exposure**

Not classified (Based on available data, the classification criteria are not met)

**Aspiration Hazard**

Not classified (Based on available data, the classification criteria are not met)

**Likely routes of exposure**

Skin, ingestion, inhalation

**Symptoms related to the physical, chemical and toxicological characteristics**

Contents irritating to eyes due to chemical and physical properties of the mixture. Inhalation of contents may cause gastrointestinal irritation with nausea, vomiting and diarrhea. Individuals with known allergies to sulfide drugs may also have allergic reactions to elemental sulfur.

**Delayed and immediate effects and chronic effects from short and long term exposure**

Inhalation of contents or smoke from burning flare will cause irritation to the lungs and mucus membrane. Prolonged or repeated skin contact with contents may cause dermatitis.

**Interactive effects**

No information found

12. Ecological Information

**Ingredient toxicity / persistence / degradability / bioaccumulation / mobility in soil and water**

**Aquatic Toxicity**

Strontium Nitrate: Acute toxicity - Fishes, Carassius auratus, LC100, 9,615 mg/l; Chronic toxicity - Fishes, Gasterosteus aculeatus, LC100, 2,912 mg/l

Sulfur: Toxicity to fish LC50 - Onchorynchus mykiss (rainbow trout) - > 180 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - > 5,000 mg/l - 48 h

Potassium Chlorate: fish LC50 onchorynchus mykiss (rainbow trout) 1750 mg/l – 96 hr, EC50 daphnia magna (water flea) 1093 mg/l/24 hr

Paraffinic Oil: Oil Mist, Mineral Lepomis macrochirus (LC50) 96 hour(s) >100 mg/l Onchorhynchus mykiss (LC50) 96 hour(s) >100 mg/l

Potassium Nitrate: fish: Guppy (Poecilia Reticulata) LC50 180 mg/L (96 h); zooplankton: Daphnia magna LC50 490mg/l – 48h

**Persistence / Degradability**

Potassium Nitrate: Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation / Accumulation**

No information found

**Mobility in Environmental Media**

No information found

**Other adverse effects**

No information found
13. Disposal Considerations (for spills and leakage)

**Disposal methods**
Flares should be allowed to burn to completion. Partially burned or unburned flares, spilled contents, and ash from burned flares should be disposed of in accordance with federal, state, and local requirements. Consult factory for any additional disposal concerns.

14. Transportation Information

<table>
<thead>
<tr>
<th>Packaging Description</th>
<th>ID Number</th>
<th>Proper Shipping Name</th>
<th>Hazard Class</th>
<th>PG</th>
<th>EX Number</th>
<th>Reportable Quantities</th>
<th>Comments</th>
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<tr>
<td>Inner Packaging (bag)</td>
<td>UN0373</td>
<td>Signal devices, hand</td>
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<td>EX1992090001</td>
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<td>Allowed by Passenger Aircraft, Ground, Vessel</td>
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<td>Allowed for Domestic Shipments / Noted on Original classification shown above</td>
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<td>Allowed when packaged as specified on Approval / Reference #EX2002110114</td>
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<td></td>
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<tr>
<td>*Specific on Approval</td>
<td>**UN3178</td>
<td>Flammable solid, inorganic, n.o.s.</td>
<td>4.1</td>
<td>II</td>
<td>EX2002110114</td>
<td>none</td>
<td>*Up to 4 fusees per inner package, up to 144 fusees per outer package.</td>
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</table>

**According to 49CFR, Exceptions for Class 4, Limited Quantities of flares properly packaged and classed as UN3178, Flammable solid, inorganic, n.o.s. are excepted from several requirements unless offered for transport by air or they may be renamed “Consumer Commodity” and reclassed as ORM-D and offered for transport in accordance with the applicable provisions of that subchapter.**

**Marine Pollutant: no**

Special precautions for user: No information available.

15. Regulatory Information

<table>
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<tr>
<th>US Regulations</th>
<th>TS CA</th>
<th>CERCLA</th>
<th>CWA</th>
<th>CAA</th>
<th>SARA 313</th>
<th>SARA 302</th>
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<th>Chronic</th>
<th>Fire</th>
<th>Reactivity</th>
<th>Pressure</th>
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<tr>
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**US States**

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<tr>
<th>Prop 65</th>
<th>NJ</th>
<th>PA</th>
<th>Canada</th>
<th>WHMIS</th>
<th>DLS</th>
<th>Europe</th>
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<td>1743</td>
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<td>C Oxidizing materials</td>
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<td>1757</td>
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<td>B4 Flammable solid</td>
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<td>D2A Very Toxic materials</td>
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4
16. Other Information

<table>
<thead>
<tr>
<th>NFPA Rating</th>
<th>HMIS Rating</th>
</tr>
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<tbody>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Health</td>
<td>2</td>
</tr>
<tr>
<td>Reactivity</td>
<td>1</td>
</tr>
</tbody>
</table>

Key / Legend
- HMIS: hazardous material identification system
- NFPA: national fire protection association
- CAS: Chemical Abstracts Service number
- EINECS: European inventory of existing chemical substances
- OSHA PEL: occupational safety and health administration permissible exposure limit
- NIOSH TLV: national institute of occupational safety and health Threshold Limit Value
- NTP: National Toxicology Program
- IARC: International Agency for Research on Cancer
- CWA: clean water act - US
- TSCA: toxic substance control act - US
- CERCLA: comprehensive environmental response compensation and liability act – US
- CAA: clean air act - US
- SARA: superfund amendments and reauthorization act – US
- PROP 65: California’s Proposition 65 list
- WHMIS: workplace hazardous materials information system - Canada
- DSL: Domestic Substances List - Canada
- WGK: water hazard classes - Germany

Legal Statement
This information is accurate to the best knowledge of Orion Safety Products. Orion Safety Products makes no representations or warranties, either express or implied, including without limitation any warranties of merchantability or fitness for a particular purpose, with respect to the information set forth herein or the product to which the information refers. Accordingly, Orion Safety Products will not be responsible for damages resulting from use of or reliance upon this information. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.
SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : GLOW STICK
Product description : GLOW STICK, GLOW BRACELET, GLOW NECKLACE, GLOW CUP, GLOW WAND WITH ASST COLORS RED/GREEN/BLUE/YELLOW/PINK/ORANGE/PURPLE/WHITE/AQUA

1.2. Recommended use and restrictions on use

Main use category : Used in decoration.
Restrictions on use : No information available

1.3. Supplier

Supplier : Xiamen Long Afterglow Co., Ltd.
Address : No.1043, Tong Ji Zhong Road, Tong An Area, Xiamen, Fujian Province, China
Phone : +86-592-3675699
FAX : +86-592-3675698
E-mail : elaine@glo-novelty.com
Web : www.glo-novelty.com

1.4. Emergency telephone number

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification
Not classified

2.2. GHS Label elements, including precautionary statements

GHS-US labelling
No labelling applicable
Hazard pictograms (GHS-US) : None
Signal word (GHS-US) : None
Hazard statements (GHS-US) : Not applicable
Precautionary statements (GHS-US) : Not applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

This technical report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.
3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier (CAS-No.)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl phthalate</td>
<td>131-11-3</td>
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<td>Butyl benzoate</td>
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</tr>
<tr>
<td>Bis(2,3,5-trichloro-6-[[pentyl oxy]carbonyl]phenyl] oxalate</td>
<td>75203-51-9</td>
<td>4.7</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>7722-84-1</td>
<td>2.2</td>
</tr>
<tr>
<td>Anthracene, 9,10-bis(phenylethynyl)-</td>
<td>10075-85-1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general: If you feel unwell, seek medical advice (show directions for use or safety data sheet if possible).

First-aid measures after inhalation:
- Remove person to fresh air and keep comfortable for breathing;
- Give oxygen or artificial respiration if necessary;
- If you feel unwell, seek medical advice.

First-aid measures after skin contact:
- Wash skin with plenty of water and take off contaminated clothing;
- If skin irritation or rash occurs: Get medical advice/attention;
- Wash contaminated clothing before reuse.

First-aid measures after eye contact:
- Rinse cautiously with water for several minutes while holding the eyelids wide open;
- Remove contact lenses, if present and easy to do. Continue rinsing;
- If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion:
- If swallowed, rinse mouth;
- Do not induce vomiting;
- Give nothing or a little water to drink;
- Never give anything by mouth to an unconscious person;
- If you feel unwell, seek medical advice;

4.2. Most important symptoms and effects (acute and delayed)

No information available.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use carbon dioxide, dry extinguishing media, water spray, water.

Unsuitable extinguishing media: None

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire: Combustion produces toxic or irritating gases and fumes.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Other information: Evacuate personnel to a safe area. Move containers from fire area if it can be done without personal risk. Cool tanks/drums with water spray/remove them into safety. Stay upwind. Avoid breathing vapour or dusts. Provide storage and work areas with suitable fire extinguishers. Collect contaminated firefighting water separately, it must not enter drains.
### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6.1.1. For non-emergency personnel</strong></td>
<td>Emergency procedures: Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes and inhalation of vapors.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6.1.2. For emergency responders</strong></td>
<td>Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: &quot;Exposure controls/personal protection&quot;. Emergency procedures: Stop leak if safe to do so. Evacuate personnel to a safe area; Ensure adequate ventilation, especially in confined areas; No flames, no sparks. Eliminate all sources of ignition.</td>
</tr>
</tbody>
</table>

#### 6.2. Environmental precautions

Although the product is not classified as dangerous to the environment, it is advised that in the event of an accidental release the product should be prevented from reaching the sewage system or any water course, and from penetrating the ground/soil. Dispose of spilled material in accordance with the relevant local regulations. See Section 13 for disposal considerations.

#### 6.3. Methods and material for containment and cleaning up

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>For containment</td>
<td>Isolate the spillage. Ensure adequate ventilation. Collect mechanically. Fill into labeled, suitable sealed containers for disposal in accordance with local authority regulations.</td>
</tr>
</tbody>
</table>

Methods for cleaning up: For large amounts: Transfer product into suitable containers. For residues: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with regulations. Other information: Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautions for safe handling</td>
<td>Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Observe personal protective measures listed in section 8. Do not handle until all safety precautions have been read and understood. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Keep away from heat, sparks, flame and other sources of ignition. Avoid breathing vapors or mists. Any deposit of dust which cannot be avoided must be removed regularly.</td>
</tr>
</tbody>
</table>

Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Remove contaminated clothing and protective equipment before entering eating areas. Avoid formation of dust, inhalation and ingestion. Avoid contact with eyes, skin and clothing.

#### 7.2. Conditions for safe storage, including any incompatibilities

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage conditions</td>
<td>Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep locked up and out of reach of children. Keep away from food, drink and animal feeding stuffs. Always keep in containers of the same material as the original one. Store away from incompatible substances (reducing agents, nitrite salts and potassium chloride).</td>
</tr>
</tbody>
</table>
SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH TWA (mg/m³)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>US IDLH (mg/m³)</th>
<th>NIOSH REL (TWA) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimethyl phthalate (131-11-3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH</td>
<td></td>
<td>5 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td></td>
<td>5 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IDLH</td>
<td></td>
<td>2000 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td></td>
<td>5 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butyl benzoate (136-60-7)</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bis[2,3,5-trichloro-6-[(pentyloxy)carbonyl]phenyl] oxalate (75203-51-9)</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrogen peroxide (7722-84-1)</td>
<td>ACGIH TWA (ppm)</td>
<td>1 ppm</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>1.4 mg/m³</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td></td>
<td>1 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>US IDLH (ppm)</td>
<td>75 ppm</td>
<td>NIOSH REL (TWA) (mg/m³)</td>
<td>1.4 mg/m³</td>
</tr>
<tr>
<td></td>
<td>NIOSH</td>
<td></td>
<td>1 ppm</td>
<td></td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anthracene, 9,10-bis(phenylethylnyl)- (10075-85-1)</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Remove all sources of ignition.

Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Wear appropriate chemical resistant gloves.

Eye protection:
Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin and body protection:
Wear appropriate chemical resistant clothing.

Respiratory protection:
The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.

50 mg/m³
Any air-purifying full-facepiece respirator equipped with an N95, R95, or P95 filter. The following filters may also be used: N99, R99, P99, N100, R100 or P100.

125 mg/m³
Any supplied-air respirator operated in a continuous-flow mode.
Any powered, air-purifying respirator with a high-efficiency particulate filter.

250 mg/m³
Any air-purifying, full-facepiece respirator equipped with an N100, R100, or P100 filter.
Any self-contained breathing apparatus with a full facepiece.
Any supplied-air respirator with a full facepiece.

2000 mg/m³
Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode.
Emergency or planned entry into unknown concentrations or IDLH conditions
Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.
Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Escape
Any air-purifying, full-facepiece respirator equipped with an N100, R100, or P100 filter.
Any appropriate escape-type, self-contained breathing apparatus.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;200°F (93.3°C) Closed Cup</td>
</tr>
<tr>
<td>Relative evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>The product is not classified as flammable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20°C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive based on experience and structural considerations</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not oxidizing based on experience and structural considerations</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available
### SECTION 10: Stability and reactivity

**10.1. Reactivity**
Stable under recommended storage and handling conditions (see section 7, handling and storage).

**10.2. Chemical stability**
Stable under normal conditions.

**10.3. Possibility of hazardous reactions**
Will not polymerize.

**10.4. Conditions to avoid**
Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

**10.5. Incompatible materials**
Acids, bases, oxidizing materials.

**10.6. Hazardous decomposition products**
Carbon monoxide (CO), carbon dioxide (CO₂) and other toxic vapors.

### SECTION 11: Toxicological information

**11.1. Information on toxicological effects**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td><strong>Dimethyl phthalate (131-11-3)</strong></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>6800 mg/kg</td>
</tr>
<tr>
<td><strong>Butyl benzoate (136-60-7)</strong></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>735 mg/kg</td>
</tr>
<tr>
<td><strong>Hydrogen peroxide (7722-84-1)</strong></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>801 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>4060 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>2000 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>2 g/m³ (Exposure time: 4 h)</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological information

**12.1. Toxicity**

Ecology - general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimethyl phthalate (131-11-3)</strong></td>
<td></td>
</tr>
<tr>
<td>LC50 fish (Exposure time: 96 h - Species: Lepomis macrochirus)</td>
<td>49.5 mg/l</td>
</tr>
<tr>
<td>LC50 fish (Exposure time: 96 h - Species: Pimephales promelas)</td>
<td>39 mg/l</td>
</tr>
<tr>
<td>LC50 fish (Exposure time: 96 h - Species: Lepomis macrochirus [static])</td>
<td>37 - 69 mg/l</td>
</tr>
<tr>
<td>LC50 fish (Exposure time: 96 h - Species: Pimephales promelas)</td>
<td>121 mg/l</td>
</tr>
</tbody>
</table>
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### Dimethyl phthalate (131-11-3)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish</td>
<td>100 - 220 mg/l (Exposure time: 96 h - Species: Leuciscus idus [static])</td>
</tr>
<tr>
<td>LC50 fish</td>
<td>56 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)</td>
</tr>
<tr>
<td>EC50 Daphnia</td>
<td>33 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
<tr>
<td>EC50 Algae</td>
<td>20.6 - 45.8 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)</td>
</tr>
<tr>
<td>EC50 Algae</td>
<td>28.4 - 71 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)</td>
</tr>
<tr>
<td>EC50 Algae</td>
<td>142 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)</td>
</tr>
<tr>
<td>EC50 Algae</td>
<td>26.1 mg/l (Exposure time: 96 h - Species: Skeletonema costatum)</td>
</tr>
<tr>
<td>EC50 Algae</td>
<td>204 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)</td>
</tr>
</tbody>
</table>

### Hydrogen peroxide (7722-84-1)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish</td>
<td>16.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas)</td>
</tr>
<tr>
<td>LC50 fish</td>
<td>18 - 56 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])</td>
</tr>
<tr>
<td>LC50 fish</td>
<td>10 - 32 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)</td>
</tr>
<tr>
<td>EC50 Daphnia</td>
<td>18 - 32 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])</td>
</tr>
<tr>
<td>EC50 Daphnia</td>
<td>7.7 mg/l (Exposure time: 24 h - Species: Daphnia magna [Static])</td>
</tr>
<tr>
<td>EC50 Algae</td>
<td>2.5 mg/l (Exposure time: 72 h)</td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability
No additional information available

#### 12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish</td>
<td>4.7 - 57</td>
</tr>
<tr>
<td>Log Pow</td>
<td>2.12</td>
</tr>
</tbody>
</table>

#### 12.4. Mobility in soil
No additional information available

#### 12.5. Other adverse effects

- **Effect on the global warming**: No known effects from this product.
- **GWPmix comment**: No known effects from this product.

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990 Hazardous Air Pollutant (Clean Air Act)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

- **Waste treatment methods**: Dispose of contents/container in accordance with licensed collector’s sorting instructions.
- **Product/Packaging disposal recommendations**: Dispose of contents/container in accordance with licensed collector’s sorting instructions.

### SECTION 14: Transport Information

#### Department of Transportation (DOT)

In accordance with DOT

Not applicable

#### Transportation of Dangerous Goods

Not applicable
Transport by sea
Not applicable

Air transport
Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Substance</th>
<th>Inventory</th>
<th>Reporting Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimethyl phthalate (131-11-3)</strong></td>
<td>Listed</td>
<td>Subject to reporting requirements of United States SARA Section 313</td>
</tr>
<tr>
<td><strong>Butyl benzoate (136-60-7)</strong></td>
<td>Listed</td>
<td></td>
</tr>
<tr>
<td><strong>Hydrogen peroxide (7722-84-1)</strong></td>
<td>Listed</td>
<td>Section 302 EPCRA Reportable Quantity (RQ) 1000 lb concentration &gt;52%</td>
</tr>
<tr>
<td><strong>Hydrogen peroxide (7722-84-1)</strong></td>
<td>Listed</td>
<td>SARA Section 302 Threshold Planning Quantity (TPQ) 1000 lb (concentration &gt;52%)</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Listed</td>
<td></td>
</tr>
<tr>
<td>Anthracene, 9,10-bis(phenylethynyl)- (10075-85-1)</td>
<td>Listed</td>
<td></td>
</tr>
</tbody>
</table>

15.2. International regulations

CANADA

<table>
<thead>
<tr>
<th>Substance</th>
<th>Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimethyl phthalate (131-11-3)</strong></td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
<tr>
<td><strong>Butyl benzoate (136-60-7)</strong></td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
<tr>
<td><strong>Hydrogen peroxide (7722-84-1)</strong></td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
<tr>
<td>Anthracene, 9,10-bis(phenylethynyl)- (10075-85-1)</td>
<td>Listed on the Canadian NDSL (Non-Domestic Substances List)</td>
</tr>
</tbody>
</table>

EU-Regulations

<table>
<thead>
<tr>
<th>Substance</th>
<th>Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimethyl phthalate (131-11-3)</strong></td>
<td>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
<tr>
<td><strong>Butyl benzoate (136-60-7)</strong></td>
<td>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
<tr>
<td><strong>Bis[2,3,5-trichloro-6{(pentyloxy)carbonyl}phenyl] oxalate (75203-51-9)</strong></td>
<td>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
<tr>
<td><strong>Hydrogen peroxide (7722-84-1)</strong></td>
<td>Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)</td>
</tr>
</tbody>
</table>
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**Water (7732-18-5)**
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**Anthracene, 9,10-bis(phenylethynyl)- (10075-85-1)**
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### National regulations

**Dimethyl phthalate (131-11-3)**
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Japanese ISHL (Industrial Safety and Health Law)
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on INSQ (Mexican National Inventory of Chemical Substances)
- Listed on Turkish inventory of chemical
- Listed on the TCSI (Taiwan Chemical Substance Inventory)

**Butyl benzoate (136-60-7)**
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Japanese ISHL (Industrial Safety and Health Law)
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on INSQ (Mexican National Inventory of Chemical Substances)
- Listed on Turkish inventory of chemical
- Listed on the TCSI (Taiwan Chemical Substance Inventory)

**Bis[2,3,5-trichloro-6-[(pentyloxy)carbonyl]phenyl] oxalate (75203-51-9)**
Listed on the Korean ECL (Existing Chemicals List)

**Hydrogen peroxide (7722-84-1)**
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Japanese ISHL (Industrial Safety and Health Law)
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on INSQ (Mexican National Inventory of Chemical Substances)
- Listed on Turkish inventory of chemical
- Listed on the TCSI (Taiwan Chemical Substance Inventory)

**Water (7732-18-5)**
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on INSQ (Mexican National Inventory of Chemical Substances)
- Listed on the TCSI (Taiwan Chemical Substance Inventory)

**Anthracene, 9,10-bis(phenylethynyl)- (10075-85-1)**
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Korean ECL (Existing Chemicals List)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

### 15.3. US State regulations

No additional information available
SECTION 16: Other information

Issue date: 02-Feb-2018
Revision date: 02-Feb-2018

Full text of H-phrases
None

Key or legend to abbreviations and acronyms used in the safety data sheet
ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Dangerous Goods
IATA: International Air Transport Association
ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterway
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
PBT: Persistent, Bioaccumulative and Toxic
vPvB: Very Persistent and Very Bioaccumulative
DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration
LC50: Lethal Concentration 50
LD50: Lethal Dose 50
EC50: Effective Concentration 50
TWA: Time Weighted Average
STEL: Short Term Exposure Limit

Key literature references and sources for data
ECHA: http://echa.europa.eu/
ICSC: http://www.ilo.org/dyn/icsc/showcard.home

SDS US (GHS HazCom 2012)
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
TÜV SÜD Group

Engineer: ___________________ Technical Report checked: ___________________
Kevin Zhang Ben Shao
SAFETY DATA SHEET

SECTION 1. Product and Company Identification

PRODUCT NAME: BZK Antiseptic Towelette
PRODUCT USE: Antiseptic
Product Code: 1303, 1331
Manufacturer’s Name: Dynarex Corporation
Manufacturer’s Address: 10 Glenshaw Street
Orangeburg, NY 10962
Emergency or Information Phone No.: 888-DYNAREX or 845-365-8200
At other times, contact the local Poison Control Center

SECTION 2. Hazards Identification

Physical hazards: Not classified
Health hazards: Not classified
- Environmental hazards: Not determined
OHSA defined hazards: Not classified
Label elements:
- Hazard symbol: None
- Signal word: Not available
- Hazard statement: Not available
- Precautionary statement:
  - Prevention: Not available
  - Response: Not available
  - Storage: Not available
  - Disposal: Not available
Hazard(s) not otherwise classified (HNOC): None known
Supplemental information: None
SECTION 3. Composition/information on Ingredients

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>BZK</td>
<td>8001-54-5</td>
<td>0.13</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>99.87</td>
</tr>
</tbody>
</table>

SECTION 4. First-aid measures

First aid procedures

Eye Contact
Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.

Skin Contact
In case of skin irritation, discontinue use of product.

Inhalation
Not a normal route of exposure. If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

Ingestion
Not a normal route of exposure. Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

Notes to physician
Symptoms may be delayed.

General advice
If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Keep out of reach of children. Avoid contact with eyes.

Flammable Limits: N/A
Flash Point: N/A
SECTION 5. Fire-fighting measures

Flash Point: Not Available
Flammable Limits: Not Available
Extinguishing Media: Any
Special Fire Fighting Procedures: None
Unusual Fire and Explosion Hazards: None

SECTION 6. Accidental release measures

Personal precautions: Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Methods for containment: Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up: Pick up and discard towel.

SECTION 7. Handling and storage

Handling: Use good industrial hygiene practices in handling this material.

Storage: Keep out of reach of children. Store in a closed container away from incompatible materials.

SECTION 8. Exposure controls/personal protection

Engineering controls: General ventilation normally adequate.

Personal protective equipment
Eye/Face protection: Follow standard industrial hygiene practices.
Hand protection: Not required.
Skin and body protection: As required by employer code.
Respiratory protection: Where exposure guideline levels may be exceeded, use and approved NIOSH respirator.
General hygiene considerations: Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink.

SECTION 9. Physical and chemical properties

Appearance/Odor: Liquid saturated on wipe
Color: Clear liquid
Form: Liquid saturated on wipe
Odor: Characteristic
Odor Threshold: Not available
Physical State: Solid
Boiling Point: <200°F
Paper Components: 100% Virgin Paper
Specific Gravity: 1

SECTION 10. Stability and reactivity

Chemical Stability: Stable under recommended storage conditions.
Hazardous Decomposition Products: May include and are not limited to: oxides of carbon; hydrogen chloride.
Hazardous Polymerization: Will not occur.
Conditions to avoid: Do not mix with other chemicals.

SECTION 11. Toxicological information

Effects of acute exposure

   Eye     May cause irritation
Skin
In case of skin irritation, discontinue use of the product.

Inhalation
Not a normal route of exposure. May cause respiratory tract irritation.

Ingestion
Not a normal route of exposure. May cause stomach distress, nausea or vomiting.

Sensitization
Non-hazardous by WHMIS/OSHA criteria.

Chronic Effects
Non-hazardous by WHMIS/OSHA criteria.

Carcinogenicity
Non-hazardous by WHMIS/OSHA criteria.

Mutagenicity
Non-hazardous by WHMIS/OSHA criteria.

Reproductive Effects
Non-hazardous by WHMIS/OSHA criteria.

Teratogenicity
Non-hazardous by WHMIS/OSHA criteria.

SECTION 12. Ecological information

Ecotoxicity Not available

Environmental effects Not available

Aquatic toxicity Not available

Persistence / degradability Not available

Bioaccumulation / accumulation Not available

Partition coefficient Not available

Mobility in environmental media Not available

Chemical fate information Not available

Other adverse effects Not available

SECTION 13. Disposal considerations

Waste codes: Not available
Disposal instructions: Discard after single use.

Review federal, state/provincial, and local government requirements prior to disposal.

Discard with solid waste. Dispose in accordance with all applicable regulations.

Waste from residues / unused products: Not available

Contaminated packaging: Not available

SECTION 14. Transport information

U.S. Department of Transportation (DOT) Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada) Not regulated as dangerous goods.

SECTION 15. Regulatory information

**Canadian federal regulations** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**US Federal regulations** This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

**Occupational Safety and Health Administration (OSHA)**

29 CFR 1910.1200 hazardous No chemical

**CERCLA (Superfund) reportable quantity**

Benzene: 10.0000
Benzen, methyl:- 1000.0000
Benzene, (chloromethyl):- 100.0000
Propylene oxide: 100.0000

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Corporate Headquarters
10 Glenshaw Street, Orangeburg, NY 10962
Tel: 845.365.8200 • Fax: 845.365.8201
Toll-Free: 888.DYNAREX

Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No
Section 311 hazardous chemical No
Clean Air Act (CAA) Not available
Clean Water Act (CWA) Not available
Safe Drinking Water Act (SDWA) Not available
Drug Enforcement Agency (DEA) Not available
Food and Drug Administration (FDA) Not available

State regulations WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

SECTION 16. Other information
Disclaimer:
This Safety Data Sheet, which takes into consideration the requirements of Directive 76/768/EC and subsequent amendments and Directive 1999/45/EC plus subsequent amendments, has been prepared in accordance with Directive (EC) 1907/2006. It is believed to be correct and corresponds to the latest scientific/technical knowledge but all data, instructions, recommendations and/or suggestions are made without guarantee. No warranty, expressed or implied, is made and Dynarex Corp. assumes no legal responsibility or liability resulting from its use.
SECTION 1: PRODUCT IDENTIFICATION

Product: Alcohol Prep Pads

Product Label Name: Dukal Alcohol Prep Pads (private label included)

Company Name and Address: Dukal Corporation
2 Fleetwood Court
Ronkonkoma, NY 11779

Emergency Telephone Number: 631-656-3800

Recommended use: This product is intended for use as a skin antiseptic. It is for external use only.

SECTION 2: HAZARDOUS IDENTIFICATION

Hazard Class/Category: Flammable Liquid – 3
Eye Irritation – 2B

Hazard Symbol: "\n
Signal Word: Warning

Hazard Statements: Flammable liquid and vapor. (H226)
Causes eye irritation. (H320)

Precautionary statements:

General: Keep out of reach of children. (P102)

Eyes: IF IN EYES: Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention. (P305+P338) (P337+P313)

SECTION 3: INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS #</th>
<th>Concentration</th>
<th>R Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol</td>
<td>67-63-0</td>
<td>70%</td>
<td>R11</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>30%</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 4: FIRST-AID MEASURES

Emergency first aid procedures by route of exposure:

**Inhalation**: If symptoms are experienced, remove source of contamination or move victim to fresh air. If affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

**Ingestion**: Do not induce vomiting. If the material is swallowed have victim drink 1-3 glasses of water to dilute stomach contents. Seek medical attention or advice.

**Skin**: If irritation is experienced, rinse with water. If irritation persists, seek medical attention.

**Eyes**: Rinse eyes with water for 15 minutes holding the eye open. Seek medical attention if irritation persists.

SECTION 5: FIRE-FIGHTING MEASURES

**Flammability Classification**: Flammable Liquid IB Extinguishing Media: Use methods appropriate for the surrounding fire. Consider water spray or fog, carbon dioxide, dry chemical powder, or alcohol resistant foam.

**Products of Combustion**: Upon decomposition this product may emit carbon dioxide, carbon monoxide and/or low molecular weight hydrocarbons.

**Fire Fighting Equipment/Instructions**: Wear protective clothing and equipment suitable for the surrounding fire, including helmet, facemask, and self contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions**: For large spills wear gloves, safety glasses and when levels exceed OSHA PEL use appropriate NIOSH approved respiratory protection. Keep unnecessary personnel away. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

**Environmental Precautions**: Prevent discharge to open waters.

**Method for Containment**: Absorb spilled liquid in suitable non-flammable inert material such as clay, vermiculite or diatomaceous earth.

**Methods for Clean-Up**: Ventilate area of leak or spill. Use spark-proof tools to sweep or scrape up and containerize in approved chemical waste container. Wash spill area with water.

SECTION 7: HANDLING AND STORAGE

**Handling**: Keep away from heat, sparks and flame. Prevent contact with eyes. Use in well ventilated area.

OSHA Standard Format
Storage: Keep the container tightly closed and in a cool, well ventilated place.

SECTION 8: EXPOSURE CONTROLS

**Isopropyl Alcohol (67-63-0)**

- **ACGIH**: 200 ppm TWA
- **OSHA**: 400 ppm TWA; 980 mg/m³ TWA

**Engineering Controls:** Normal room ventilation is usually adequate under normal use.

**Personal Protective Equipment (PPE):**

- **Eye/face Protection**: None needed under normal use – Wear goggles is exposed to unusual amount and splashing
- **Skin Protection**: None needed under normal use -- Wear overalls or apron if splashing is possible
- **Respiratory Protection**: May be needed if vapor concentrations are high.

**General Hygiene Considerations**: None needed under normal use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Physical State**: Non-woven cloth saturated with liquid. There may be some free liquid in packaging.

- **Appearance/Color**: Clear
- **Odor**: Alcohol
- **PH**: Not Available.
- **Vapor Density**: 2.1 (air=1)
- **Boiling Point**: 80°C
- **Vapor Pressure**: No data
- **Melting Point**: No data
- **Freezing Point**: Not Available

**Flammability Properties** (see section 5)

- **Solubility (in water)**: Soluble
- **Specific Gravity @ 25°C**: 0.88-0.92
- **Evaporation Rate**: Not Available
- **Octanol/Water partition coefficient**: Not Available
- **Auto-ignition temperature**: Not Available
- **Decomposition temperature**: Not Available

SECTION 10: STABILITY AND REACTIVITY

**Stability**: Stable under normal ambient temperatures 70°C (21°C)

**Condition to Avoid**: Avoid excessive heat or sources of ignition.

**Incompatible Materials**: This product reacts with strong acid, strong bases, and oxidizing agents.

**Hazardous Decomposition**: Upon decomposition, this product evolves carbon monoxide, carbon dioxide, and/or low weight hydrocarbons.
Hazardous Reactions: Hazardous polymerization will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:
A: General Product information
   Product contains isopropyl alcohol.
B: Acute Toxicity
   Low order of acute toxicity is possible.

CHRONIC EFFECTS: Component
Isopropyl Alcohol (67-63-0) – This product is not expected to cause long term adverse effects
Carcinogenicity: ACGIH A4 – Not Classifiable as a Human Carcinogen
Neurotoxicity: No information available
Mutagenicity: No information available for product.
Reproductive: This product is not expected to cause reproductive health effects
Developmental: This product is not expected to cause reproductive health effects.
Target Organs: When consumed, ethyl alcohol can target the respiratory system, skin, eyes, CNS, liver, blood and reproductive system.

SECTION 12: ECOLOGICAL INFORMATION

Solutions of alcohols are toxic to aquatic life at moderate to low concentrations. No long-term ecological effects are likely. Concentrated solutions of alcohols and surfactants may cause damage to aquatic and terrestrial plants.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose in accordance with federal state and local regulations. Labels should not be removed from containers until they have been cleaned. Do not cut, puncture or weld near container. Do not incinerate closed containers. Empty containers may contain hazardous residues. Dispose of containers with care.

SECTION 14: TRANSPORATION INFORMATION

DOT
   Not Regulated as Hazardous Material under DOT 49 CFR 172.102 Special Provision 47
Proper Shipping Name
   Solids containing Flammable Liquid. n.o.s. (Isopropanol)
Hazard Class
   4.1
Packing Group
   II
Description
   Solids Containing Flammable Liquid n.o.s. (Isopropanol)
UN#
   UN3175

UN-No.
   UN3175
Proper Shipping Name
   Solids Containing Flammable Liquid n.o.s. (Isopropanol)
Hazard Class
   4.1
Packing Group
   II
Description
   Solids Containing Flammable Liquid n.o.s. (Isopropanol)

OSHA Standard Format
IATA

Not Regulated as Hazardous Material under IATA Sec. 4.4
Special Provision A46

UN-No. UN3175
Proper Shipping Name Solids Containing Flammable Liquid n.o.s. (Isopropanol)
Hazard Class 4.1
Packing Group II
Description Solids Containing Flammable Liquid n.o.s. (Isopropanol)
Marine Pollutant No

IMDG/IMO

Not Regulated as Hazardous Material under IMDG Ch. 3.3
Special Provision 216

UN-No. UN3175
Proper Shipping Name Solids Containing Flammable Liquid n.o.s. (Isopropanol)
Hazard Class 4.1
Packing Group II
Description Solids Containing Flammable Liquid n.o.s. (Isopropanol)
Marine Pollutant No

DOT/IATA/IMDG Special Provisions: (DOT) Mixtures of solids that are not subject to this subchapter and flammable liquids may be transported under this entry without first applying the classification criteria of Division 4.1, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Except when the liquids are fully absorbed in solid material contained in sealed bags, for single packagings, each packaging must correspond to a design type that has passed a leakproofness test at the Packing Group II level. Small inner packagings consisting of sealed packets and articles containing less than 10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to this subchapter provided there is no free liquid in the packet or article. (IATA) Small inner packagings consisting of sealed packets or articles containing less than 10 mL of a Packing Group II or III flammable liquid absorbed into a solid material are not subject to these Regulations provided there is no free liquid in the packet or article. (IMDG) Sealed packets containing 10 ml or less of Class 3 flammable liquids in Packing Group II or III which are absorbed into a solid with no free liquid at the time of shipment are not regulated.
**SECTION 15: REGULATORY INFORMATION**

**DOT / USA**
Product Description: Solid Containing Flammable Liquid n.o.s. (Isopropanol)

**SECTION 16: OTHER INFORMATION**

Issue Date: 03-26-14  
Revision Date: 12-13-16

**Disclaimer:**

The information provided in this SDS is correct and is to the best of our knowledge, at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.
SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Identifier  #007
Product Name  First Aid Burn Cream
Product Use  Topical Antiseptic and Analgesic Skin Cream
Manufacturer  Water Jel Technologies LLC
50 Broad Street
Carlstadt, New Jersey 07072
Telephone  201-507-8300
E-mail Address  www.waterjel.com
Emergency Telephone 1-800-275-3433
FAX Number  201-507-8325

SECTION 2: HAZARDS IDENTIFICATION

Emergency Overview:
This product is regulated by the US FDA as an over-the-counter, monograph drug.

For Consumers, consult the Drug Facts on the package for use directions and warnings information.

    Warnings: For External Use Only.
    When using this product, avoid contact with the eyes.
    Do not use on large areas of the body or on broken, blistered or oozing skin.
    Stop use and ask a doctor if condition worsens or symptoms persist for more than 7 days.
    If swallowed, get medical help or contact a Poison Control Center immediately.

Physical Hazards:  This mixture does not meet the classification criteria according to OSHA Hazcom 2012.
Health Hazards:  This mixture does not meet the classification criteria according to OSHA Hazcom 2012.
Environmental Hazards:  This mixture does not meet the classification criteria according to OSHA Hazcom 2012.
OSHA Defined Hazards:  This mixture does not meet the classification criteria according to OSHA Hazcom 2012.

Label Elements:
Hazard Symbol:  None
Signal Word:  None
Hazard Statement: The mixture does not meet the criteria for classification.
Precautionary Statement:
Prevention  None required according to OSHA Hazcom 2012.
Response  None required according to OSHA Hazcom 2012.
Storage  None required according to OSHA Hazcom 2012.
Disposal  None required according to OSHA Hazcom 2012.

Hazards not otherwise Classified (HNOC):  None known.

Supplemental Information:  None.
Route of Entry:

Skin Contact: May cause irritation, redness, inflammation or dryness.
Skin Absorption: No adverse conditions expected.
Eye Contact: Flush eyes with clear running water for a minimum of 15 minutes; if irritation persists, seek medical attention.
Inhalation: Not expected due to form.
Ingestion: May cause irritation of the digestive tract.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Common Name and Synonyms</th>
<th>CAS Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzalkonium Chloride</td>
<td>63449-41-2</td>
<td>0.13</td>
<td></td>
</tr>
<tr>
<td>Lidocaine HCl</td>
<td>6108-05-0</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Glycerin</td>
<td>1, 2, 3, Propanetriol</td>
<td>56-81-5</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Triethanolamine</td>
<td>Trolamine</td>
<td>102-71-6</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Propylene Glycol</td>
<td>1, 2, 3, Propanetriol 2-Hydroxypropanol</td>
<td>57-55-6</td>
<td>Proprietary</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

Skin Contact: Wash off with warm water and soap. Get medical attention if symptoms occur.
Skin Absorption: No adverse conditions expected.
Eye Contact: Flush eyes with clear running water for a minimum of 15 minutes; if irritation persists, seek medical attention.
Inhalation: Remove victim to fresh air.
Ingestion: May cause irritation of the digestive tract.

SECTION 5: FIRE-FIGHTING MEASURES

Flammable: No
Means of Extinction: Use extinguishing media appropriate for surrounding fire. Use water spray, foam or dry chemical.
In fires involving large quantities of this product, the use of large streams of water should be avoided.
Use self-contained breathing apparatus when fighting fires that involve this material.
Flash Point and Method: NA
Upper Flammable Limit (% by volume): NA
Lower Flammable Limit (% by volume): NA
Autoignition Temperature (°C): NA
Explosion Data – Sensitivity to Impact: No unusual fire or explosion hazards noted.
Explosion Data – Sensitivity to Static Discharge: No unusual fire or explosion hazards noted.

NFPA Health 1 Fire 0 Reactivity 0 Other NA
SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, Protective equipment and Emergency procedures: Wear appropriate personal protective equipment.

Methods and materials for containment and clean up: Absorb spill with vermiculite or other inert material, then place in a sealed container for chemical waste.

Large Spills: Flush with plenty of water. Prevent entry into waterways, sewer, basements or confined areas. Dike for later disposal.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental Precautions: Avoid discharge into drains and water sources.

SECTION 7: HANDLING AND STORAGE

Handling Procedures and Equipment: Keep this and other chemicals out of the reach of children.

Storage Temperature: Do not store or mix with strong acids or oxidizers. Store at room temperature.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

<table>
<thead>
<tr>
<th>Components</th>
<th>ACGIH-TLVs</th>
<th>OSHA-PELs</th>
<th>NIOSH</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin (CAS 57-55-8)</td>
<td>NE</td>
<td>5 mg/m3</td>
<td></td>
<td>Aerosol</td>
</tr>
<tr>
<td>Propylene Glycol (CAS 57-55-6)</td>
<td>10 mg/m3</td>
<td>NE</td>
<td>NE</td>
<td>Aerosol</td>
</tr>
<tr>
<td>Triethanolamine (CAS 102-71-6)</td>
<td>5 mg/m3</td>
<td>NE</td>
<td>NE</td>
<td>Aerosol</td>
</tr>
</tbody>
</table>

Biological Limit Values: No biological Exposure limits noted for the ingredients.

Ventilation and Engineering Controls: Ensure adequate ventilation.

Personal Protective Equipment: None required under normal conditions
Hand Protection: None required under normal conditions.
Eye and Face Protection: Eye protection, as necessary to prevent excessive contact.
Skin Protection: None required under normal conditions.

General Hygiene Considerations: Practice safe work habits.
Other Protective Equipment: Eye wash stations should be nearby and ready to use.
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Cream.
Physical State: Cream.
Form: Cream.
Color: White, homogeneous.
Odor: Slightly fatty odor.

pH: No information available.
Boiling Point: 275°F
Melting Point: No information available.
Flash Point: N/A
Explosive Properties: No information available.
Oxidizing Properties: No information available.
Specific Gravity: 0.81
Water Solubility: Miscible.
Partition Coefficient: No information available.
Viscosity: No information available.
Vapor Pressure (mm Hg): No information available.
Vapor Density (Air=1): No information available.
Evaporation Rate: No information available.
% Volatile: No information available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: The product is stable and non-reactive under normal conditions of use.
Chemical Stability: Stable at normal conditions.
Possibility of Hazardous Reactions: Hazardous polymerization does not occur.
Conditions to Avoid: Extreme heat.
Materials to Avoid: Strong oxidants and strong acids.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Symptoms of Overexposure by Route of Exposure:
The health hazard information provided is for handling this product in an occupational setting.

Effects of Acute and Chronic Exposure:

Acute: The primary health effect that may be experienced in an occupational setting is mild irritation of contaminated skin. Accidental ingestion may be harmful. Although unlikely, irritation can irritate the respiratory system. Eye contact will cause irritation.

Chronic: NE

Target Organs: Acute: Occupational exposure: Skin, eyes.
Chronic: Occupational exposure: Skin.

Inhalation:
Mist may slightly irritate the nose, throat and lungs. Symptoms are generally alleviated upon breathing fresh air.
Skin Contact:
Skin contact may cause burning sensation, stinging, itching and tingling.

Eye Contact:
Eye contact can cause irritation, stinging, redness and tearing.

Ingestion:
Ingestion is not a significant route of occupational overexposure. Acute ingestion of large quantities of this product or chronic ingestion may cause adverse symptoms that may include nausea, vomiting and diarrhea.

Irritancy of the Product:
This product may cause mild to moderate irritation on damaged skin.

Skin Sensitization:
Not expected.

Respiratory Sensitization:
Not expected.

LD50/LC50:

Propylene Glycol (CAS 57-55-6)
- Oral (rat): 2200mg/kg
- Dermal: (rabbit) 20800 mg/kg

Triethanolamine):
- Oral (rat): 6110 mg/kg
- Dermal: (rabbit): >19870 mg/kg

Glycerin (Mist):
- Oral (rat): 12,600 mg/kg
- Subcutaneous (rat): Not Available

Carcinogenicity: Not classified as a human carcinogen by IARC or ACGIH.

Reproductive Toxicity:

Mutagenic/Embryo Toxicity: The components of this product are not reported to cause mutagenic or embryonic effects in humans.
Teratogenicity: Not available.
Reproductive Toxicity: Not available.

SECTION 12: ECOLOGICAL INFORMATION

No specific information is currently available on the effect of this product on plants or animals in the environment. The product may be harmful to contaminated terrestrial and aquatic plant life in large quantities. The following aquatic toxicity data currently available for components of this product:

Propylene Glycol:

EC50 Green Algae (Desmodesmus subspicatus) 19000 mg/l 96 hours
EC50 Water Flea (Daphnia magna) 43500 mg/l 48 hours
LC 50 Fathead Minnow (Pimephales promelas) 46500 mg/l 96 hours
Triethanolamine:

EC50 Green Algae (Desmodesmus subspicatus) 512 mg/l 72 hours
NOEC Water Flea (Daphnia magna) 16 mg/l 21 days
LC 50 Fathead Minnow (Pimephales promelas) 11800 mg/l 96 hours

Environmental Exposure Controls: Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

No component of this product is known to have ozone depletion potential.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: Collect or dispose in sealed containers at licensed waste disposal site.
Dispose in accordance with local, state and federal regulations.

SECTION 14: TRANSPORT INFORMATION

DOT Classification: Not regulated for Domestic Transport.
IATA Classification: Not regulated for International Transport.
IMDG Classification: Not regulated for International Water Transport.

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations:
TSCA (TOXIC SUBSTANCE CONTROL ACT): Not regulated.
CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Not listed.
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT) 304: Not regulated.
SARA 311/312 HAZARD CATEGORIES: Not regulated.
SARA 313 REPORTABLE INGREDIENTS: Not listed.

STATE REGULATIONS:
California Prop 65:
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

New Jersey RTK:
Glycerin (CAS 56-81-5)
Propylene Glycol (CAS 57-55-6)
Triethanolamine (CAS 102-71-6)

Massachusetts RTK:
Triethanolamine (CAS 102-71-6)

Pennsylvania RTK:
Propylene Glycol (CAS 57-55-6)
Triethanolamine (CAS 102-71-6)
INTERNATIONAL REGULATIONS:

<table>
<thead>
<tr>
<th>Country or Region</th>
<th>Inventory Name</th>
<th>Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australia Inventory of Chemical Substances</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substance List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substance List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China:</td>
<td>Inventory of Existing Chemical Substances In China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substance Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

Note: A “Yes” indicates that all components comply with the inventory requirements administered by the governing country. A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country.

SECTION 16: OTHER INFORMATION

Issue Date: 08-25-2015

Version: 02

Disclaimer:
The information provided in this Safety Data Sheet (SDS) is accurate to the best of our knowledge. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or processes.
SAFETY DATA SHEET

1. IDENTIFICATION

Product Identifier
Product Name Towelette with Fragrance

Recommended use and restrictions on use
Recommended Use Hand Cleaner Towelette

Supplier of Safety Data Sheet
Supplier Address
Sanfacon Virginia Inc
18097 US HWY 501/933 Sanfacon Road
Brookneal, VA 24528

2. HAZARDS IDENTIFICATION

Appearance Fragrance Towelette Physical State Solid Odor Lemon

Classification
This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains important information to the safety and proper use of this towelette. This SDS should be made available to all possible users.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Active Ingredient</th>
<th>% in product:</th>
<th>CAS Number:</th>
<th>Hazard Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Water</td>
<td>90-100%</td>
<td>7732-18-5</td>
<td>None anticipated</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First Aid Measures
Eye Contact Do not rub eyes. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention
Skin Contact No irritation or reaction expected. If skin irritation occurs, rinse affected area with water
Inhalation Remove to fresh air, Get medical attention if symptoms occur
Ingestion Get medical attention

Indication of any immediate medical attention and special treatment needed
Note to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Dry Chemical. Carbon dioxide (CO2). Water.

Specific Hazards Arising from the Chemical
Product is not flammable.

**Protective equipment and precautions or firefighters**

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

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

- **Personal precautions**: Use personal protection recommended in Section 8.
- **Environmental Precautions**: Prevent from entering into soil, ditches, seweres, waterways and/or groundwater.

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

- **Methods for Containment**: Prevent further leakage or spillage if safe to do so.
- **Methods for Clean-Up**: Flood area with water and then mop up. Spill area may be slippery.

### 7. HANDLING AND STORAGE

**Precautions for safe handling**

- **Advice on Safe Handling**: Handle in accordance with good industrial hygiene and safety practice. Use personal protection in Section 8. Avoid contact with skin, eyes, and clothing. Do destroy or deface the label.

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

- **Storage Conditions**: Keep container tightly closed and store in a cool, dry and well-ventilated place. Store containers upright. Protect from freezing.
- **Incompatible Materials**: Non known based on information supplied.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines**

- No exposure limits noted for ingredient(s) The following information is given as general guidance

**Individual protection measure**

- **Eye/Face Protection**: No protection is ordinarily required under normal conditions of use.
- **Skin and Body Protection**: No protection is ordinarily required under normal conditions of use.
- **Respiratory Protection**: No protection is ordinarily required under normal conditions of use and with adequate ventilation.

**General Hygiene Considerations**: Handle in accordance with good industrial hygiene and safety practice.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

- **Appearance**: Fluid Soak Towelette
- **Odor**: Lemon Scent
- **Odor Threshold**: Not Determined
- **Melting Point/Freezing Point**: Not determined
- **Boiling Point/Boiling Range**: Not determined
- **Flash Point**: >100 °C / >212 °F
- **Evaporation Rate**: Not determined
- **Flammability (solid, Gas)**: Not determined
- **Upper Flammability Limits**: Not determined
- **Lower Flammability Limit**: Not determined
10. STABILITY AND REACTIVITY

**Reactivity**
Not reactive under normal conditions

**Chemical Stability**
Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**
None under normal processing.

**Conditions to Avoid**
Keep from freezing. Keep out of reach of children.

**Incompatible Materials**
None known based on information supplied

**Hazardous Decomposition Products**
None known based on information supplied

11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

- **Product Information**
  - **Eye Contact**: Avoid contact with eyes.
  - **Skin Contact**: Not expected to be a skin irritant during prescribed use.
  - **Inhalation**: Avoid breathing vapors or mist
  - **Ingestion**: Do not ingest.

**Information on physical, chemical and toxicological effect**

**Symptoms**
Please see section 4 of this SDS for symptoms.

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

**Carcinogenicity**
This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Numerical measures of toxicity**
Not Determined

12. ECOLOGICAL INFORMATION

**Ecotoxicity**
The product is not classified as environmentally hazardous. However, this not not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence/Degradability**
Not determined.
Bioaccumulation
Not determined.

Mobility
Not determined.

Other Adverse Effect
Not determined.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes
Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

Note
Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT
Not regulated

IATA
Not regulated

15. REGULATORY INFORMATION

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

RCRA Hazardous Waste Number (40 CFR 261.33): None
US RCRA Hazard Class: None
SARA 311/312-Hazard Categories: None
  □Fire  □Sudden Release  □Reactivity  □Immediate (acute) □Chronic (delayed)
SARA 313- Toxic Chemicals (40 CFR 372): None
SARA 302- Extremely Hazardous Substance: None

16. OTHER INFORMATION

ISSUE DATE: SEPTEMBER 10, 2015

The information in this MSDS was obtained from current and reputable sources. However, the data is provided without any warranty, express, or implied, regarding its correctness or accuracy. It is the user's responsibility to determine safe condition for use of this product and to assume liability for loss, input, damage, or expense resulting from improper use of this product.
SECTION 1: PRODUCT IDENTIFICATION

Product: Sting Relief Pad
Product Label Name: Sting Relief Pad
Company Name and Address: Dukal Corporation
2 Fleetwood Court
Ronkonkoma, NY 11779
Emergency Telephone Number: 631-656-3800

SECTION 2: HAZARDOUS IDENTIFICATION

Hazard Class/Category: Flammable Liquid – 3
Eye Irritation – 2A
STOT (Single Exposure) - 3

Hazard Symbol: 

Signal Word: Warning

Hazard Statements: Flammable liquid and vapor. (H226)
Causes serious eye irritation. (H319)
May cause drowsiness or dizziness. (H336)

Precautionary statements:

General: Keep out of reach of children. (P102)

Eyes: IF IN EYES: Rinse cautiously with water for several minutes.
If eye irritation persists: Get medical advice/attention.
(P305+P338) (P337+P313)

Respiratory: Avoid breathing fumes/mist/vapors. (P261)

SECTION 3: INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS #</th>
<th>Concentration</th>
<th>R Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol</td>
<td>67-63-0</td>
<td>60%</td>
<td>R11</td>
</tr>
<tr>
<td>Benzocaine</td>
<td>94-09-7</td>
<td>6%</td>
<td></td>
</tr>
</tbody>
</table>

Chemical Formula: NH2C6H4COOC2H5 / CH3CHOHCH3

OSHA Standard Format
**SECTION 4: FIRST-AID MEASURES**

Emergency first aid procedures by route of exposure:

**Inhalation**: If symptoms are experienced, remove source of contamination or move victim to fresh air. If affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

**Ingestion**: Do not induce vomiting. If the material is swallowed have victim drink 1-3 glasses of water to dilute stomach contents. Seek medical attention or advice.

**Skin**: If irritation is experienced, discontinue use. If irritation persists, seek medical attention.

**Eyes**: Rinse eyes with cool water for 15 minutes holding the eye open. Seek medical attention if irritation persists.

**SECTION 5: FIRE-FIGHTING MEASURES**

**Flash Point**: 68.5°F, TOC Method

**Flammable Limits**: 750°F

**Extinguishing Media**: Use methods appropriate for the surrounding fire. Suggested: CO2, dry chemical powder, or alcohol resistant foam.

**Products of Combustion**: Upon decomposition this product may emit carbon dioxide, carbon monoxide and/or low molecular weight hydrocarbons.

**Fire Fighting Equipment/Instructions**: Wear protective clothing and equipment suitable for the surrounding fire, including helmet, facemask, and self contained breathing apparatus.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions**: For large spills wear gloves, safety glasses and when levels exceed OSHA PEL use appropriate NIOSH approved respiratory protection. Keep unnecessary personnel away. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

**Environmental Precautions**: Prevent discharge to open waters.

**Method for Containment**: Absorb spilled liquid in suitable non-flammable inert material such as clay, vermiculite or diatomaceous earth.

**Methods for Clean-Up**: Ventilate area of leak or spill. Use spark-proof tools to sweep or scrape up and containerize in approved chemical waste container. Wash spill area with water.

OSHA Standard Format
SECTION 7: HANDLING AND STORAGE

Handling: Keep away from heat, sparks and flame. Prevent contact with eyes. Use in well ventilated area.

Storage: Keep the container tightly closed and in a cool, well ventilated place.

SECTION 8: EXPOSURE CONTROLS

Isopropyl Alcohol (67-63-0)
ACGIH OEL: 200 ppm TWA
OSHA OEL: 400 ppm TWA; 980 mg/m3 TWA

Engineering Controls: Normal room ventilation is usually adequate under normal use.

Personal Protective Equipment (PPE):

Eye/Face Protection: None needed under normal use – Wear goggles if exposed to unusual amount and splashing

Skin Protection: None needed under normal use -- Wear overalls or apron if splashing is possible

Respiratory Protection: May be needed if vapor concentrations are high.

General Hygiene Considerations: None needed under normal use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Individually sealed Sting Relief Packet. No free liquid inside packaging.
Appearance/Color: White Non-Woven cloth saturated with clear solution
Odor: Alcohol
PH: Not Available.
Vapor Pressure: Not Available.
Flammability Properties (see section 5)
Solubility (in water): Chemical Is Soluble, Pad Not Soluble
Specific Gravity @ 25°C: 0.8405
Evaporation Rate: Not Available
Auto-ignition temperature: Not Available
Decomposition temperature: Not Available

OSHA Standard Format
SECTION 10: STABILITY AND REACTIVITY

Stability: Stable under normal ambient temperatures 70°C (21°C)
Condition to Avoid: Avoid excessive heat or sources of ignition.
Incompatible Materials: This product reacts with strong acid, strong bases, and oxidizing agents.
Hazardous Decomposition: Not Available.
Hazardous Reactions: Hazardous polymerization will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:
A: General Product information
   Product contains isopropyl alcohol.
B: Acute Toxicity
   Low order of acute toxicity is possible.
CHRONIC EFFECTS: Component
   Isopropyl Alcohol (67-63-0) -- This product is not expected to cause long term adverse effects
   Carcinogenicity: Not Classifiable as a Human Carcinogen
   Reproductive: This product is not expected to cause reproductive health effects
   Developmental: This product is not expected to cause reproductive health effects.
   Target Organs: When consumed, isopropyl alcohol can target the respiratory system, skin, eyes, CNS, liver, blood and reproductive system.

SECTION 12: ECOLOGICAL INFORMATION

Mixtures of alcohols are toxic to aquatic life at moderate to low concentrations. No long-term ecological effects are likely. Concentrated solutions of alcohols and surfactants may cause damage to aquatic and terrestrial plants.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose in accordance with federal state and local regulations. Labels should not be removed from containers until they have been cleaned. Do not cut, puncture or weld near container. Do not incinerate closed containers. Empty containers may contain hazardous residues. Dispose of containers with care.

SECTION 14: TRANSPORTATION INFORMATION

DOT Not Regulated as Hazardous Material under DOT 49 CFR 172.102 Special Provision 47
Proper Shipping Name Solids containing Flammable Liquid. n.o.s. (Isopropanol)
Hazard Class 4.1
Packing Group II
Description Solids Containing Flammable Liquid n.o.s. (Isopropanol)
UN# UN3175

OSHA Standard Format
UN-No. UN3175
Proper Shipping Name Solids Containing Flammable Liquid n.o.s. (Isopropanol)
Hazard Class 4.1
Packing Group II
Description Solids Containing Flammable Liquid n.o.s. (Isopropanol)

IATA Not Regulated as Hazardous Material under IATA Sec. 4.4
Special Provision A46

UN-No. UN3175
Proper Shipping Name Solids Containing Flammable Liquid n.o.s. (Isopropanol)
Hazard Class 4.1
Packing Group II
Description Solids Containing Flammable Liquid n.o.s. (Isopropanol)
Marine Pollutant No

IMDG/IMO Not Regulated as Hazardous Material under IMDG Ch. 3.3
Special Provision 216

Special Provisions Verbiage: (DOT) Mixtures of solids that are not subject to this subchapter and flammable liquids may be transported under this entry without first applying the classification criteria of Division 4.1, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Except when the liquids are fully absorbed in solid material contained in sealed bags, for single packagings, each packaging must correspond to a design type that has passed a leakproofness test at the Packing Group II level. Small inner packagings consisting of sealed packets and articles containing less than 10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to this subchapter provided there is no free liquid in the packet or article. (UN: ARD/RID/ADN) SP216: Mixtures of solids which are not subjects to these Regulations and flammable liquids may be transported under this entry without first applying the classification criteria of Division 4.1, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging or cargo transport unit is closed. Each cargo transport unit shall be leakproof when used as a bulk packaging. Sealed packets and articles containing less than 10 mL of a packing group II or III flammable liquid absorbed into a solid are not subject to these Regulations provided there is no free liquid in the packet or article. SP313: Sealed packets and articles containing less than 10 mL of an environmentally hazardous liquid, absorbed into a solid material but with no free liquid in the packet or article, or containing less than 10 g of an environmentally hazardous solid, are not subject to these Regulations. (IATA) Small inner packagings consisting of sealed packets or articles containing less than 10 mL of a Packing Group II or III flammable liquid absorbed into a solid material are not subject to these Regulations.
provided there is no free liquid in the packet or article (IACAO) Mixtures of solids which are not subject to these Instructions and flammable liquids may be transported under this entry without first applying the classification criteria of Division 4.1, providing there is no free liquid visible at the time the substance is packaged and the packaging must pass a leakproofness test at the Packing Group II level. Small inner packagings consisting of sealed packets or articles containing less than 10 mL of a Packing Group II or III flammable liquid absorbed into a solid material are not subject to these Instructions provided there is no free liquid in the packet or articles. (IMDG) Sealed packets containing 10 ml or less of Class 3 flammable liquids in Packing Group II or III which are absorbed into a solid with no free liquid at the time of shipment are not regulated.

SECTION 15: REGULATORY INFORMATION

DOT / USA

Product Description: Solid Containing Flammable Liquid n.o.s. (Isopropanol)

SECTION 16: OTHER INFORMATION

Issue Date: 03-26-2014
Revision Date: 08-19-2019

Disclaimer:

The information provided in this SDS is correct and is to the best of our knowledge, at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.
### SECTION 1: PRODUCT IDENTIFICATION

**PRODUCT:** Urea Cold Pack  
**Product Label Name:** Urea Cold Pack  
**Company Name and Address:** Dukal Corporation  
  2 Fleetwood Court  
  Ronkonkoma, NY 11779  
**Emergency Telephone Number:** 631-656-3800  
**Recommended use:**

### SECTION 2: HAZARDOUS IDENTIFICATION

| Hazard Class/Category | Acute Toxicity | Cat. 5  
| Eye Irritant | Cat. 2A  
| Skin Irritant | Cat. 3  

**Hazard Symbol:** No Symbol  
**Signal Word, Cautions or Precautionary statements:** WARNING. May be harmful if swallowed or inhaled. Causes eye irritation. Causes skin irritation. Causes respiratory irritation. IF SWALLOWED: Call a POISON CENTER or doctor/physician. Induce vomiting as directed. IF IN EYES: Rinse cautiously with water for at least 15 minutes. Get medical advice/attention. IF ON SKIN: Rinse cautiously with water for several minutes. Take off contaminated clothing and wash before reuse.  
**Additional Label Precautions:**  
- Avoid breathing dust.  
- Keep container closed.  
- Avoid contact with eyes, skin and clothing.  
- Use only with adequate ventilation.  
- If breathing is difficult, give oxygen. In any case, get medical attention.

**Product Use:** Laboratory Reagent  
**Synonyms:** Carbamide resin; Isourea; Carbonyl diamide; Carbonyldiamine  
**CAS No.:** 57-13-6  
**Molecular Weight:** 60.06  
**Eye:**  
- Eye irritant. Contact may cause stinging, watering, redness, and swelling.  
**Skin:**  
- Skin irritant. Contact may cause redness, itching, burning and skin damage. No harmful effects from skin absorption have been reported.  
**Inhalation (Breathing):** Low to moderate degree of toxicity by inhalation.  
**Ingestion (Swallowing):** Low to moderate degree of toxicity by ingestion.  
**Signs and Symptoms:** Effects of overexposure may include irritation of the nose, throat and digestive tract; coughing, nausea, vomiting, diarrhea, abdominal pain, breathing difficulties, and blood disorders (methemoglobinemia).  

OSHA Standard Format
SAFETY DATA SHEET

Cancer: No data available.
Target Organs: No data available.
Developmental: Inadequate data available for this material.
Other Comments: This material contains nitrate salts. Nitrates may be reduced by intestinal bacteria to nitrite. When absorbed, nitrates may result in effects on the blood (methemoglobinemia) and blood vessels (vasodilating and a fall in blood pressure). Symptoms of toxicity may include headache, fainting, fatigue, cyanosis, confusion, irregular heartbeats, and possible respiratory paralysis. Pre-existing heart disease may be aggravated by exposure to nitrates.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include heart, blood vessel and skin disorders.

SECTION 3: INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No</th>
<th>Percent</th>
<th>Hazardous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>57-13-6</td>
<td>50%</td>
<td>Yes</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>50%</td>
<td>No</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST-AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if symptoms occur.
Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
Ingestion: Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

Fire: Not considered to be a fire hazard.
Explosion: Reactions with incompatibles may pose an explosion hazard.
Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.
Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

OSHA Standard Format
SECTION 6: ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

SECTION 7: HANDLING AND STORAGE

To preserve product integrity, store at 25°C, excursions permitted between 15°C and 30°C. Store in a tightly closed container. Protect container from physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

SECTION 8: EXPOSURE CONTROLS

Airborne Exposure Limits:
For Urea:
AIHA Workplace Environmental Exposure Limit (WEEL):
Ventilation System:

10 mg/m³, 8-hour TWA
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal Respirators (NIOSH Approved):
If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator.

WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. If heat is involved, an ammonia/methylamine, dust/mist cartridge may be necessary.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

OSHA Standard Format
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White crystals or white powder.
Odor: Develops odor of ammonia.
Solubility: Very soluble in water.
Specific Gravity: 1.32 @ 20°C/4°C
pH: 7.2 (10% in water)
% Volatiles by volume @ 21°C (70°F): 0
Boiling Point: Decomposes.
Melting Point: 132 – 135°C (270 – 275°F)
Vapor Density (Air=1): No information found.
Vapor Pressure (mm Hg): No information found.
Evaporation Rate (BuAc=1): No information found.

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products: Urea decomposes upon heating and can form products including ammonia, oxides of nitrogen, cyanuric acid, cyanic acid, biuret, carbon dioxide.
Hazardous Polymerization: Will not occur.
Incompatibilities: Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride. It is incompatible with sodium nitrite, gallium perchlorate, strong oxidizing agents (permanganate, dichromate, nitrate, chlorine), phosphorus pentachloride, nitrosyl perchlorate, titanium tetrachloride and chromyl chloride.
Conditions to Avoid: Incompatibles.

SECTION 11: TOXICOLOGICAL INFORMATION

Urea (100%): Oral rat LD50: 8471 mg/kg. Investigated as a tumorigen, mutagen, and reproductive effector.

Section 12: ECOLOGICAL INFORMATION

Environmental Fate: When released to soil, this material will hydrolyze into ammonium in a matter of days to several weeks. When released into the soil, this material may leach into groundwater. When released into water, this material may biodegrade to a moderate extent. When released into water, this material is not expected to evaporate significantly. This material has an experimentally-determined bioconcentration factor (BCF) of less than 100. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life of less than 1 day.

Environmental Toxicity: No information found.
SAFETY DATA SHEET

Section 13: DISPOSABLE CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14: TRANSPORTATION INFORMATION

Hazard Class or Division: Not classified as hazardous.

Section 15: REGULATORY INFORMATION

N/A

SECTION 16: OTHER INFORMATION

Issue Date: 09-15-2014
Revision Date: 12-7-2015

Disclaimer

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

Product identifier

Product Name
Heavy Duty and General Purpose Battery

Other means of identification
Synonyms
None

Recommended use of the chemical and restrictions on use

Recommended Use
Carbon Zinc Battery

Uses advised against
No information available

Details of the supplier of the safety data sheet

Supplier Name
Spectrum Brands, Inc

Supplier Address
3001 Deming Way
Middleton
WI
53562
US

Supplier Phone Number
Phone: 703-527-3887
Contact Phone: 1-479-254-1729

Supplier Email
marcy.stokes@spectrumbrands.com

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.

| Acute toxicity - Oral | Category 4 |
| Acute toxicity - Inhalation (Gases) | Category 4 |
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4 |
| Skin corrosion/irritation | Category 1 Sub-category B |
GHS Label elements, including precautionary statements

**Emergency Overview**

**Signal word** Danger

**Hazard Statements**

Harmful if inhaled
Causes severe skin burns and eye damage
Suspected of causing cancer
May cause damage to organs through prolonged or repeated exposure

---

**Precautionary Statements - Prevention**

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray

---

**Precautionary Statements - Response**

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see supplemental first aid instructions on this label)

---

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician

---

**Skin**

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

---

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
Immediately call a POISON CENTER or doctor/physician

---

**Ingestion**
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Unknown Toxicity
20.98% of the mixture consists of ingredient(s) of unknown toxicity

Other information
Very toxic to aquatic life with long lasting effects

Interactions with Other Chemicals
Use of alcoholic beverages may enhance toxic effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese dioxide</td>
<td>1313-13-9</td>
<td>15 - 40</td>
<td>*</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>10 - 30</td>
<td>*</td>
</tr>
<tr>
<td>Iron</td>
<td>7439-89-6</td>
<td>10 - 30</td>
<td>*</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>10 - 30</td>
<td>*</td>
</tr>
<tr>
<td>Zinc chloride</td>
<td>7646-85-7</td>
<td>7 - 13</td>
<td>*</td>
</tr>
<tr>
<td>Ammonium chloride</td>
<td>12125-02-9</td>
<td>1 - 5</td>
<td>*</td>
</tr>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>&lt; 0.1</td>
<td>*</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

General Advice
First aid is upon rupture of sealed battery.

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. Seek immediate medical attention/advice.

Skin Contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Seek immediate medical attention/advice.

Inhalation
Remove to fresh air. If breathing has stopped, give artificial respiration. Get
medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

**Ingestion**

Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**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 contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

**Most important symptoms and effects, both acute and delayed**

**Most Important Symptoms and Effects**

Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician**

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.
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.

Specific Hazards Arising from the Chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.

Uniform Fire Code
Corrosive: Other--Solid
Toxic: Solid

Hazardous Combustion Products
Carbon oxides.

Explosion Data
Sensitivity to Mechanical Impact No.
Sensitivity to Static Discharge No.

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

Personal precautions, protective equipment and emergency procedures

Personal Precautions
Attention! Corrosive material. 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. Avoid generation of dust. Do not breathe dust.

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

Environmental Precautions

Environmental Precautions
Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

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

Handling
In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

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

Incompatible Products

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese dioxide</td>
<td>TWA: 0.02 mg/m³ Mn</td>
<td>(vacated) Ceiling: 5 mg/m³</td>
<td>IDLH: 500 mg/m³ Mn</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.1 mg/m³ Mn</td>
<td>Ceiling: 5 mg/m³ Mn</td>
<td>TWA: 1 mg/m³ Mn</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STEL: 3 mg/m³ Mn</td>
</tr>
<tr>
<td>Zinc</td>
<td>STEL: 10 mg/m³ respirable fraction</td>
<td>TWA: 5 mg/m³ fume</td>
<td>IDLH: 500 mg/m³ fume</td>
</tr>
<tr>
<td></td>
<td>TWA: 2 mg/m³ respirable fraction</td>
<td>TWA: 15 mg/m³ total dust</td>
<td>Ceiling: 15 mg/m³ dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 5 mg/m³ respirable fraction</td>
<td>TWA: 5 mg/m³ dust and fume</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STEL: 10 mg/m³ fume</td>
</tr>
<tr>
<td>Carbon black</td>
<td>TWA: 3 mg/m³ inhalable fraction</td>
<td>TWA: 3.5 mg/m³</td>
<td>IDLH: 1750 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) TWA: 3.5 mg/m³</td>
<td>TWA: 3.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 0.1 mg/m³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH</td>
</tr>
<tr>
<td>Zinc chloride</td>
<td>STEL: 2 mg/m³ fume</td>
<td>TWA: 1 mg/m³ fume</td>
<td>IDLH: 50 mg/m³ fume</td>
</tr>
<tr>
<td></td>
<td>TWA: 1 mg/m³ fume</td>
<td>(vacated) TWA: 1 mg/m³ fume</td>
<td>TWA: 1 mg/m³ fume</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) STEL: 2 mg/m³ fume</td>
<td>STEL: 2 mg/m³ fume</td>
</tr>
<tr>
<td>Ammonium chloride</td>
<td>STEL: 20 mg/m³ fume</td>
<td>TWA: 10 mg/m³ fume</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ fume</td>
<td>(vacated) STEL: 20 mg/m³ fume</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>TWA: 0.05 mg/m³</td>
<td>TWA: 50 µg/m³ Pb</td>
<td>IDLH: 100 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Action Level: 30 µg/m³ Poison,</td>
<td>TWA: 0.050 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>See 29 CFR 1910.1025 Action Level: 30 µg/m³ Pb</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poison, See 29 CFR 1910.1025</td>
<td></td>
</tr>
</tbody>
</table>

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits Immediately Dangerous to Life or Health

Other Exposure Guidelines
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls
Engineering Measures

Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Face protection shield.

Skin and Body Protection
Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant apron. Impervious gloves.

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.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. 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. For environmental protection, remove and wash all contaminated protective equipment before re-use. Do not breathe dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
<td>Odor</td>
<td>Odorless</td>
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<td>Appearance</td>
<td>Solid</td>
<td>Odor Threshold</td>
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<td>Color</td>
<td>No information available</td>
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<td></td>
</tr>
<tr>
<td>pH</td>
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<td>None known</td>
<td></td>
</tr>
<tr>
<td>Melting / freezing point</td>
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<td>None known</td>
<td></td>
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<td>Boiling point / boiling range</td>
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<td>None known</td>
<td></td>
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<tr>
<td>Flash Point</td>
<td>No data available</td>
<td>None known</td>
<td></td>
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<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
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<td>None known</td>
<td></td>
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<tr>
<td>Flammability Limit in Air</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
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<td>None known</td>
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<tr>
<td>Lower flammability limit</td>
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<td>None known</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
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<td>None known</td>
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</tr>
<tr>
<td>Water Solubility</td>
<td>Partially soluble</td>
<td>None known</td>
<td></td>
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<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
<td>None known</td>
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<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
<td>None known</td>
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<tr>
<td>Explosive properties</td>
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<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
</tbody>
</table>

Other Information
10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability
Stable under recommended storage conditions.

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. Excessive heat.

Incompatible materials

Hazardous Decomposition Products
Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information
Product does not present an acute toxicity hazard based on known or supplied information.
In case of rupture:

Inhalation
Specific test data for the substance or mixture is not available. Corrosive by inhalation.
(based on components). Inhalation of corrosive fumes/gases may cause coughing, choking,
headache, dizziness, and weakness for several hours. Pulmonary edema may occur with
tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and
increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs.
Pulmonary edema can be fatal. May cause irritation of respiratory tract. Harmful by
inhalation.

Eye Contact
Specific test data for the substance or mixture is not available. Causes burns. (based on
components). Corrosive to the eyes and may cause severe damage including blindness.
Causes serious eye damage. May cause irreversible damage to eyes.

Skin Contact
Specific test data for the substance or mixture is not available. Corrosive. (based on
components). Causes burns.

Ingestion
Specific test data for the substance or mixture is not available. Causes burns. (based on
components). Ingestion causes burns of the upper digestive and respiratory tracts. May
cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark
blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the
mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung
damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause
irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea,
vomiting and diarrhea. May be harmful if swallowed.

Component Information
### Chemical Name

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD&lt;sub&gt;50&lt;/sub&gt; (Rat)</th>
<th>Dermal LD&lt;sub&gt;50&lt;/sub&gt;</th>
<th>Inhalation LC&lt;sub&gt;50&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese dioxide</td>
<td>= 9000 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1313-13-9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td>= 984 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7439-89-6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon black</td>
<td>&gt; 15400 mg/kg (Rat)</td>
<td>&gt; 3 g/kg (Rabbit)</td>
<td></td>
</tr>
<tr>
<td>1333-86-4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc chloride</td>
<td>= 350 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7646-85-7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammonium chloride</td>
<td>= 1410 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12125-02-9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Information on toxicological effects

#### Symptoms
Erythema (skin redness). Burning. May cause blindness. Coughing and/or wheezing.

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

#### Sensitization
No information available.

#### Mutagenic Effects
No information available.

#### Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black</td>
<td>A3</td>
<td>Group 2B</td>
<td></td>
<td>X</td>
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<tr>
<td>1333-86-4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>A3</td>
<td>Group 2A</td>
<td>Reasonably Anticipated</td>
<td>X</td>
</tr>
<tr>
<td>7439-92-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ACGIH (American Conference of Governmental Industrial Hygienists)**
- A3 - Animal Carcinogen

**IARC (International Agency for Research on Cancer)**
- Group 2A - Probably Carcinogenic to Humans
- Group 2B - Possibly Carcinogenic to Humans

**NTP (National Toxicology Program)**
- Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**
- X - Present

#### Reproductive Toxicity
No information available.

#### STOT - single exposure
No information available.

#### STOT - repeated exposure
Causes damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE).

#### Chronic Toxicity
Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Contains a known or suspected carcinogen. Avoid repeated exposure. Prolonged exposure may cause chronic effects. May cause adverse effects on the bone marrow and blood-forming system. Carbon black has been classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B) by inhalation.

#### Target Organ Effects
Aspiration Hazard
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)
725.00  mg/kg

ATEmix (inhalation-gas)
11,112.00  ppm (4 hr)

ATEmix (inhalation-dust/mist)
3.70  mg/l

ATEmix (inhalation-vapor)
27.16  ATEmix

12. ECOLOGICAL INFORMATION

This product contains a chemical which is listed as a severe marine pollutant according to DOT

**Ecotoxicity**
Harmful to aquatic life. Very toxic to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Daphnia Magna (Water Flea)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zinc</strong> 7440-66-6</td>
<td>96h EC50: 0.11 - 0.271 mg/L (Pseudokirchneriella subcapitata) 72h EC50: 0.09 - 0.125 mg/L (Pseudokirchneriella subcapitata)</td>
<td>96h LC50: 2.16 - 3.05 mg/L (Pimephales promelas) 96h LC50: 0.211 - 0.269 mg/L (Pimephales promelas) 96h LC50: = 2.66 mg/L (Pimephales promelas) 96h LC50: = 30 mg/L (Cyprinus carpio) 96h LC50: = 0.45 mg/L (Cyprinus carpio) 96h LC50: = 7.8 mg/L (Cyprinus carpio) 96h LC50: = 3.5 mg/L (Lepomis macrochirus) 96h LC50: = 0.24 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.59 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.41 mg/L (Oncorhynchus mykiss)</td>
<td>48h EC50: 0.139 - 0.908 mg/L</td>
<td></td>
</tr>
<tr>
<td><strong>Iron</strong> 7439-89-6</td>
<td>96h LC50: = 13.6 mg/L (Morone saxatilis)</td>
<td>24h EC50: &gt; 5600 mg/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon black 1333-86-4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ammonium chloride</strong> 12125-02-9</td>
<td>96h LC50: = 209 mg/L (Cyprinus carpio) 24h LC50: = 725 mg/L (Lepomis macrochirus)</td>
<td>24h LC50: = 202 mg/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lead</strong> 7439-92-1</td>
<td>96h LC50: = 0.44 mg/L (Cyprinus carpio) 96h LC50: = 1.17 mg/L (Oncorhynchus mykiss) 96h LC50: = 1.32 mg/L (Oncorhynchus mykiss)</td>
<td>48h EC50: = 600 µg/L</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Persistence and Degradability**
No information available.

**Bioaccumulation**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese dioxide 1313-13-9</td>
<td>&lt;0</td>
</tr>
</tbody>
</table>

**Other adverse effects**
No information available.
13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated Packaging Dispose of contents/containers in accordance with local regulations.

US EPA Waste Number D008

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>RCRA</th>
<th>RCRA - Basis for Listing</th>
<th>RCRA - D Series Wastes</th>
<th>RCRA - U Series Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>(hazardous constituent - no waste number)</td>
<td>Included in waste streams: F035, F037, F038, F039, K002, K003, K005, K046, K048, K049, K051, K052, K051, K062, K064, K065, K066, K069, K086, K100, K176</td>
<td>= 5.0 mg/L regulatory level</td>
<td></td>
</tr>
</tbody>
</table>

California Hazardous Waste Codes 181

This product contains one or more substances that are listed with the State of California as a hazardous waste.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc</td>
<td>Ignitable powder Toxic</td>
</tr>
<tr>
<td>7440-66-6</td>
<td></td>
</tr>
<tr>
<td>Zinc chloride</td>
<td>Toxic</td>
</tr>
<tr>
<td>7646-85-7</td>
<td>Corrosive</td>
</tr>
<tr>
<td>Lead</td>
<td>Toxic</td>
</tr>
<tr>
<td>7439-92-1</td>
<td></td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name NOT REGULATED
Hazard Class NON REGULATED
Marine Pollutant N/A

This product contains a chemical which is listed as a severe marine pollutant according to DOT

TDG

Not regulated

MEX

Not regulated

ICAO

Not regulated

IATA

Proper Shipping Name NOT regulated
Hazard Class NON REGULATED

Not regulated

IMDG/IMO

Hazard Class N/A
Marine Pollutant Product is a marine pollutant according to the criteria set by IMDG/IMO

RID

Not regulated
15. REGULATORY INFORMATION

International Inventories

- TSCA: Complies
  - All components are listed either on the DSL or NDSL.

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

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese dioxide - 1313-13-9</td>
<td>1313-13-9</td>
<td>15 - 40</td>
<td>1.0</td>
</tr>
<tr>
<td>Zinc - 7440-66-6</td>
<td>7440-66-6</td>
<td>10 - 30</td>
<td>1.0</td>
</tr>
<tr>
<td>Zinc chloride - 7646-85-7</td>
<td>7646-85-7</td>
<td>7 - 13</td>
<td>1.0</td>
</tr>
<tr>
<td>Ammonium chloride - 12125-02-9</td>
<td>12125-02-9</td>
<td>1 - 5</td>
<td>1.0</td>
</tr>
<tr>
<td>Lead - 7439-92-1</td>
<td>7439-92-1</td>
<td>&lt; 0.1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

- Acute Health Hazard: No
- Chronic Health Hazard: No
- Fire Hazard: No
- Sudden release of pressure hazard: No
- Reactive Hazard: No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc - 7440-66-6</td>
<td>1000 lb</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Zinc chloride - 7646-85-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammonium chloride - 12125-02-9</td>
<td>5000 lb</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead - 7439-92-1</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc - 7440-66-6</td>
<td>1000 lb</td>
<td></td>
<td>RQ 454 kg final RQ</td>
</tr>
<tr>
<td>Zinc chloride - 7646-85-7</td>
<td>1000 lb</td>
<td></td>
<td>RQ 1000 lb final RQ</td>
</tr>
</tbody>
</table>

ADR: Not regulated
ADN: Not regulated
US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon black - 1333-86-4</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>Lead - 7439-92-1</td>
<td>Carcinogen Developmental</td>
</tr>
<tr>
<td></td>
<td>Female Reproductive</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
<th>Rhode Island</th>
<th>Illinois</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese dioxide</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1313-13-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7440-66-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon black</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1333-86-4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc chloride</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7646-85-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammonium chloride</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>12125-02-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

International Regulations

Mexico
National occupational exposure limits

<table>
<thead>
<tr>
<th>Component</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese dioxide</td>
<td></td>
<td>Mexico: TWA = 0.2 mg/m³</td>
</tr>
<tr>
<td>1313-13-9 (15 - 40)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon black</td>
<td></td>
<td>Mexico: TWA = 3.5 mg/m³</td>
</tr>
<tr>
<td>1333-86-4 (10 - 30)</td>
<td></td>
<td>Mexico: STEL 7 mg/m³</td>
</tr>
<tr>
<td>Zinc chloride</td>
<td></td>
<td>Mexico: TWA = 1 mg/m³</td>
</tr>
<tr>
<td>7646-85-7 (7 - 13)</td>
<td></td>
<td>Mexico: STEL 2 mg/m³</td>
</tr>
<tr>
<td>Ammonium chloride</td>
<td></td>
<td>Mexico: TWA = 10 mg/m³</td>
</tr>
<tr>
<td>12125-02-9 (1 - 5)</td>
<td>A3</td>
<td>Mexico: STEL 20 mg/m³</td>
</tr>
<tr>
<td>Lead</td>
<td></td>
<td>Mexico: TWA = 0.15 mg/m³</td>
</tr>
<tr>
<td>7439-92-1 (&lt; 0.1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mexico - Occupational Exposure Limits - Carcinogens

Canada
WHMIS Hazard Class
Non-controlled

16. OTHER INFORMATION

NFPA Health Hazards 0 Flammability 0 Instability 0 Physical and Chemical Hazards - Personal Protection

HMIS Health Hazards 0 Flammability 0 Physical Hazard 0

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

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Revision Date 16-Apr-2015
Revision Note No information available

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End of Safety Data Sheet