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2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

**SECTION 3: Composition/Information on ingredients**

### 3.1. Substance

Not applicable

Full text of H-phrases: see section 16

### 3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene glycol</td>
<td>(CAS No) 25322-68-3</td>
<td>50 - 55</td>
<td>STOT SE 3, H335</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>(CAS No) 67-63-0</td>
<td>20 - 25</td>
<td>Flam. Lio. 2, H225, Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td>L-Menthol</td>
<td>(CAS No) 2216-51-5</td>
<td>1</td>
<td>Skin irrit. 2, H315</td>
</tr>
</tbody>
</table>

**SECTION 4: First aid measures**

### 4.1. Description of first aid measures

**First-aid measures general:**

- Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**First-aid measures after inhalation:**

- Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing stops, give artificial respiration. In case of breathing difficulties administer oxygen, by trained personnel. Seek medical attention immediately.

**First-aid measures after skin contact:**

- Immediately flush skin with plenty of water for at least 15 minutes. Remove/ Take off immediately all contaminated clothing. Do not rub the skin and eyes after direct contact with the product. Seek medical attention immediately. Wash contaminated clothing before reuse.

**First-aid measures after eye contact:**

- In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately get medical attention.

**First-aid measures after ingestion:**

- Contact a Poison Control Center immediately. Give no more than 2 glasses of water and induce vomiting by giving 30 cc (2 tablespoons) of syrup of ipecac. If victim is a child, give no more than 1 glass of water and 15cc (1 tablespoon) syrup of ipecac. If syrup of ipecac is unavailable, give 2 glasses of water and induce vomiting by touching finger to back of victim’s throat. Do not give anything by mouth to an unconscious or convulsing person. Get immediate medical attention. Immediately call a POISON CENTER or doctor/physician.

### 4.2. Most important symptoms and effects, both acute and delayed

**Symptoms/injuries after inhalation:**

- May cause respiratory irritation. May cause drowsiness or dizziness. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination.

**Symptoms/injuries after skin contact:**

- Repeated or prolonged skin contact may cause irritation.

**Symptoms/injuries after eye contact:**

- Causes serious eye irritation.

**Symptoms/injuries after ingestion:**

- Irritating to the gastrointestinal tract. May cause abdominal pain and vomiting (sometimes bloody). Ingestion may cause central nervous system depression, low blood pressure, rapid heart beat and liver damage. Early to moderate central nervous system depression may be evidenced by giddiness, headache, dizziness and nausea. In extreme cases, unconsciousness, respiratory depression and death may occur. Liver damage may be evidenced by loss of appetite, jaundice (yellowish skin color) and sometimes pain in the upper abdomen on the right side.

### 4.3. Indication of any immediate medical attention and special treatment needed

Individuals with pre-existing skin disorders, eye problems, or impaired respiratory function may be more susceptible to the effects of overexposure.
SECTION 5: Firefighting measures

5.1. Extinguishing media
Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture
Fire hazard: Highly flammable liquid and vapour.
Explosion hazard: May form flammable/explosive vapour-air mixture.
Reactivity: Thermal decomposition generates: Corrosive vapours. Reacts violently with acids. An exothermic reaction may occur.

5.3. Advice for firefighters
Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protective equipment for firefighters: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information: Containers may swell and Burst during a fire due to internal pressure caused by heat. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours. Alcohols burn with a pale blue flame which may be extremely hard to see under normal lighting conditions. Personnel may be able to feel the heat of the fire without seeing flames. Extreme caution must be exercised in fighting alcohol fires.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures: Eliminate all ignition sources if safe to do so. Use special care to avoid static electric charges. No naked lights. No smoking. Stop leak if safe to do so. No action shall be taken involving any personal risk or without suitable training. Wear protective clothing. For further information refer to section 8: Exposure controls/personal protection.

6.1.1. For non-emergency personnel
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Ventilate area.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Consult the appropriate authorities about waste disposal. Ensure all national/local regulations are observed.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Additional hazards when processed: Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Personal protective equipment should be selected based upon the conditions under which this product is handled or used. Wear personal protective equipment as required. Provide good ventilation in process area to prevent formation of vapour. Do not breathe gas, fumes, vapour or spray. No naked lights. No smoking. Use only non-sparking tools. Never use pressure to empty container. Ground/bond container and receiving equipment. Take care to allow internal pressure to escape from container before releasing closures. Remove closure carefully; internal pressure may be present. Keep closure up to prevent leakage. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Hygiene measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.
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### 7.2. Conditions for safe storage, including any incompatibilities

**Technical measures**

Use explosion-proof machinery, apparatus, ventilation facilities, tools etc. Ensure the ventilation system is regularly maintained and tested. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. A washing facility/water for eye and skin cleaning purposes should be present. Comply with applicable regulations.

**Storage conditions**

Keep only in the original container in a cool well ventilated place. Keep in fireproof place. Keep container tightly closed. Protect containers against physical damage. Detached outside storage is preferable. Inside storage should be in an NFPA approved flammable liquids storage room or cabinet. Store in corrosion-proof area at temperatures below 77 °F (25 °C). Store away from direct sunlight or other heat sources.

**Incompatible materials**

Avoid mixing with acids, most common metals, strong oxidizing agents, brass, zinc, chlorine, aluminum, copper, bronze, mercury, dimethyl sulfate and acetyl chloride.

**Storage temperature**

< 25 °C Store at temperatures below 77 °F (25 °C)

### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

<table>
<thead>
<tr>
<th>Isopropyl alcohol (67-63-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH ACGIH TWA (ppm)</td>
<td>200 ppm</td>
</tr>
<tr>
<td>USA ACGIH ACGIH STEL (ppm)</td>
<td>400 ppm</td>
</tr>
<tr>
<td>USA OSHA OSHA PEL (TWA) (mg/m³)</td>
<td>980 mg/m³</td>
</tr>
<tr>
<td>USA OSHA OSHA PEL (TWA) (ppm)</td>
<td>400 ppm</td>
</tr>
</tbody>
</table>

#### 8.2. Exposure controls

**Appropriate engineering controls**

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. Use explosion-proof ventilating equipment.

**Personal protective equipment**

Avoid all unnecessary exposure. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. For certain operations, additional Personal Protection Equipment (PPE) may be required. Protective goggles, Gloves, Protective clothing.

**Hand protection**

Wear protective gloves, rubber gloves. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

**Eye protection**

Chemical goggles or face shield.

**Skin and body protection**

Wear suitable protective clothing. Chemical resistant safety shoes.

**Respiratory protection**

Wear a self-contained breathing apparatus and appropriate personal protective equipment (PPE). Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals. Care must be taken to assure that any respirator chosen is capable of protecting the user from both ammonia and ethyl alcohol vapors.

**Other information**

Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

**Physical state**

Liquid

**Appearance**

Clear.

**Colour**

Green.

**Odour**

Odor of isopropyl alcohol, residual odor of menthol.

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<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>8.5</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt; 35 °C (=95 °F )</td>
</tr>
<tr>
<td>Flash point</td>
<td>16.6 °C (=62 °F )</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>Flammability (solid, gas)</td>
<td>No data available</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>1.029 (Specific Gravity @ 25 °C )</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</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 properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates: Corrosive vapours. Reacts violently with acids. An exothermic reaction may occur.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Avoid mixing with acids, most common metals, strong oxidizing agents, brass, zinc, chlorine, aluminum, copper, bronze, mercury, dimethyl sulfate and acetyl chloride.

10.6. Hazardous decomposition products


SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Not classified

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

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 oral rat</th>
<th>LD50 dermal rabbit</th>
<th>LC50 inhalation rat (ppm)</th>
<th>ATE CLP (oral)</th>
<th>ATE CLP (dermal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol (67-63-0)</td>
<td>4396 mg/kg</td>
<td>12800 mg/kg</td>
<td>16000 ppm (Exposure time: 8 h)</td>
<td>4396.000 mg/kg bodyweight</td>
<td>12800.000 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>L-Menthol (2216-51-5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>3300 mg/kg</td>
</tr>
<tr>
<td>ATE CLP (oral)</td>
<td>3300.000 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Polyethylene glycol (25322-88-3)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 20 ml/kg</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**

- Not classified

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

**Serious eye damage/irritation**

- Causes serious eye irritation.

  *pH: 8.5*

**Respiratory or skin sensitisation**

- Not classified

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

**Germ cell mutagenicity**

- Not classified

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

**Carcinogenicity**

- Not classified

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

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

| IARC group | 3 - Not classifiable |

**Reproductive toxicity**

- Not classified

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

**Specific target organ toxicity (single exposure)**

- May cause respiratory irritation. May cause drowsiness or dizziness.

**Specific target organ toxicity (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)*

**Potential Adverse human health effects and symptoms**

**Symptoms/injuries after inhalation**

- May cause respiratory irritation. May cause drowsiness or dizziness. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination.

**Symptoms/injuries after skin contact**

- Repeated or prolonged skin contact may cause irritation.

**Symptoms/injuries after eye contact**

- Causes serious eye irritation.

**Symptoms/injuries after ingestion**

- Irritating to the gastrointestinal tract. May cause abdominal pain and vomiting (sometimes bloody). Ingestion may cause central nervous system depression, low blood pressure, rapid heart beat and liver damage. Early to moderate central nervous system depression may be evidenced by giddiness, headache, dizziness and nausea. In extreme cases, unconsciousness, respiratory depression and death may occur. Liver damage may be evidenced by loss of appetite, jaundice (yellowish skin color) and sometimes pain in the upper abdomen on the right side.

### SECTION 12: Ecological information

#### 12.1. Toxicity

<table>
<thead>
<tr>
<th>Isopropyl alcohol (67-63-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
</tr>
<tr>
<td>LC50 fish 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>L-Menthol (2216-51-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability

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**Persistence and degradability**

- Not established.
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12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Medicaine® Sting and Bite Relief</th>
<th>Bioaccumulative potential</th>
<th>Not established.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol (67-63-0)</td>
<td>Log Pow</td>
<td>0.05 (at 25 °C)</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Other information: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Do not re-use empty containers. Ensure all national/local regulations are observed. Consult the appropriate authorities about waste disposal.

Additional information:
Ecology - waste materials:
Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport Information

In accordance with DOT
Transport document description:
UN No. (DOT): UN1993
DOT No.: 1993
DOT Proper Shipping Name: Flammable liquids, n.o.s. (contains isopropanol)
Department of Transportation (DOT) Hazard Classes: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

DOT Symbols:
G - Identifies PSN requiring a technical name
II - Medium Danger

DOT Special Provisions (49 CFR 172.102):
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 °C (1.1 bar at 122 °F), or 130 kPa at 55 °C (1.3 bar at 131 °F) are authorized.

177.274(d) Normal 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / (1 + a (tr - tf)). Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees Celsius of the liquid during filling.
TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 °C (32 °F).
TP28 - A portable tank having a minimum test pressure of 2.55 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx):
DOT Packaging Non Bulk (49 CFR 173.xxx):
DOT Packaging Bulk (49 CFR 173.xxx):
DOT Quantity Limitations Passenger aircraft (49 CFR 173.27):
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75):

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### DOT Vessel Stowage Location

| B | (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded. |

### Additional Information

| Other information | No supplementary information available, |

### ADR

- **Transport document description**: 
- **Transport by sea**: 
  - No additional information available
- **Air transport**: 
  - No additional information available

### SECTION 15: Regulatory Information

#### 15.1. US Federal regulations

<table>
<thead>
<tr>
<th><strong>Isopropyl alcohol (67-63-0)</strong></th>
<th>Listed on the United States TSCA (Toxic Substances Control Act) inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Listed on SARA Section 313 (Specific toxic chemical listings)</td>
</tr>
<tr>
<td><strong>EPA TSCA Regulatory Flag</strong></td>
<td>T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.</td>
</tr>
<tr>
<td><strong>SARA Section 313 - Emission Reporting</strong></td>
<td>1.0 % (only if manufactured by the strong acid process, no supplier notification)</td>
</tr>
</tbody>
</table>

| **L-Menthol (2216-51-5)** | Listed on the United States TSCA (Toxic Substances Control Act) inventory   |

| **Polyethylene glycol (25322-88-3)** | Listed on the United States TSCA (Toxic Substances Control Act) inventory   |

#### 15.2. International regulations

**CANADA**

<table>
<thead>
<tr>
<th><strong>Isopropyl alcohol (67-63-0)</strong></th>
<th>Listed on the Canadian DSL (Domestic Substances List) inventory.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>WHMIS Classification</strong></td>
</tr>
<tr>
<td></td>
<td>Class D Division 2 Subdivision B - Toxic material causing other toxic effects</td>
</tr>
</tbody>
</table>

| **L-Menthol (2216-51-5)** | Listed on the Canadian DSL (Domestic Substances List) inventory. |

| **Polyethylene glycol (25322-88-3)** | Listed on the Canadian DSL (Domestic Substances List) inventory. |

**EU-Regulations**

| **Isopropyl alcohol (67-63-0)** | Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances. |

| **L-Menthol (2216-51-5)** | Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances. |

| **Polyethylene glycol (25322-88-3)** | Listed on the EU - No-Longer Polymers List (67/548/EEC) |

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

- Not classified

**Classification according to Directive 67/548/EEC or 1999/45/EC**

- Not classified
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15.2.2. National regulations

Isopropyl alcohol (67-63-0)
- Listed on the AICS (the Australian Inventory of Chemical Substances)
- Listed on Inventory of Existing Chemical Substances (IECSC)
- Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
- Listed on Industrial Safety and Health Law Substances (ISHL)
- Listed on the Korean ECL (Existing Chemical List) inventory.
- Listed on New Zealand - Inventory of Chemicals (NZIoC)
- Listed on Inventory of Chemicals and Chemical Substances (PICCS)
- Listed on the Canadian Ingredient Disclosure List

L-Menthol (2216-51-5)
- Listed on the AICS (the Australian Inventory of Chemical Substances)
- Listed on Inventory of Existing Chemical Substances (IECSC)
- Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
- Listed on Industrial Safety and Health Law Substances (ISHL)
- Listed on the Korean ECL (Existing Chemical List) inventory.
- Listed on New Zealand - Inventory of Chemicals (NZIoC)
- Listed on Inventory of Chemicals and Chemical Substances (PICCS)

Polyethylene glycol (25322-68-3)
- Listed on the AICS (the Australian Inventory of Chemical Substances)
- Listed on Inventory of Existing Chemical Substances (IECSC)
- Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
- Listed on Industrial Safety and Health Law Substances (ISHL)
- Listed on the Korean ECL (Existing Chemical List) inventory.
- Listed on New Zealand - Inventory of Chemicals (NZIoC)
- Listed on Inventory of Chemicals and Chemical Substances (PICCS)

15.3. US State regulations
No additional information available

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes Irrit. 2A</td>
<td>Serious eye damage/eye irritation, Category 2A</td>
</tr>
<tr>
<td>Flamm. Liq. 2</td>
<td>Flammable liquids Category 2</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation Category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H36</td>
<td>May cause drowsiness or dizziness</td>
</tr>
</tbody>
</table>

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 3 - Liquids and solids that can be ignited under almost all ambient conditions.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

SDS US (GHS HazCom 2012)
Medicaine® Sting and Bite Relief
Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

This Material Safety Data Sheet is intended only as a guide to the appropriate precautionary handling of the material by a person trained in, or supervised by a person trained in, the safe handling of chemical materials. James Alexander Corporation (JAC), expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose with respect to the product or information provided herein. All information appearing herein is based upon data obtained from the manufacturer(s) and/or recognized technical sources. While the information is believed to be accurate, JAC makes no representations as to its accuracy or sufficiency. Conditions of use are beyond JAC's control and therefore, users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein and does not relate to its use in combination with any other material or in any other process.
SAFETY MATCHES

Material Safety Data Sheet (essentially similar to OSHA form 20)

Manufactured by: Atlas Match, LLC
1801 South Airport Circle
Euless, Texas 76040

Phone: (817) 354-7474

Last revision Date: September 1, 2009

Product Information

Generic ID: Matches, Safety, Book or Strike on Box UN 1944
Brand Name: Atlas Book Matches, Advertising Book Matches and, various stock and special design names.

Hazard Class: Flammable Solid
Label Required: None (exception 49CFR 173.186c)

Hazardous Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Percent</th>
<th>PEL</th>
<th>Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Chlorate</td>
<td>3.0%</td>
<td>NE</td>
<td>Strong Oxidizer</td>
</tr>
<tr>
<td>Red Phosphorous</td>
<td>&lt;1.0%</td>
<td>NE</td>
<td>Flammable Solid</td>
</tr>
</tbody>
</table>

Physical Data

Appearance and Odor: Odorless manufactured article – wood or paper stem with matchhead.
Solubility in Water: Non-paper components are partially soluble
Specific Gravity: < 1.0 (water = 1.0)
Boiling Point: NA
Vapor Pressure and Density: NA
Percent Volatile: 0 to 7% moisture
Evaporation Rate: NA

Fire and Explosion Hazard Data

Flash Point: NA
Flammable Limits: NA
Auto-ignition Point: Approx. 375 degrees F, Stable at 200 degrees F for 8 hours
Extinguishing Media: Water or ABC dry chemical extinguisher

Special Fire Fighting Procedures

1. Do not open sealed packages until fire is controlled, in order to limit oxygen availability.
2. Smoke from significant fire involvement will contain Oxides of Carbon and Sulfur Dioxide which is hazardous (TLV 2ppm), use self contained breathing apparatus.

Unusual Fire/Explosion Hazards

Possibility of ignition if subjected to extreme shock or friction.
## Health Hazard Data

<table>
<thead>
<tr>
<th>Threshold Limit Value:</th>
<th>None known for product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects of overexposure:</td>
<td>Contact with product while functioning can result in thermal burn. Burns should be immersed in cold water (unless area is extensive and 3rd degree) to relieve pain. Cover with sterile dressing and seek medical attention if required.</td>
</tr>
<tr>
<td>First Aid Procedure:</td>
<td>Stable</td>
</tr>
</tbody>
</table>

## Reactivity Data

| Stability: | Stable |
| Conditions to avoid: | Avoid temperature over 200 degrees F and extreme shock. |
| Incompatibility: | Exposure to water or extreme dampness may effect performance; strong acids and phosphorus (red or yellow forms) may cause ignition. |
| Hazardous Polymerization: | Will not occur. |

## Spill or Leak Procedures

For spills including loose matches or broke cases

Keep unnecessary personnel, open flames (including flares), heat sources and sparks away from area. Wet spilled material thoroughly before attempting clean up. Place in non-flammable container and submerge in water for one hour before disposal.

For unopened cases

Evaluate each case for possible ignition, looking for signs of smoke or warmth. Do not open any case which is warm or smoking, wet it down and dispose of when cool. Full cases not affected can be considered safe to use.

Disposal

Dispose of matches after at least one hour submersion under water by incineration or landfilling in accordance with local, state and federal regulations.

California Users-Special Instructions:

The match tips in this product contain perchlorate materials. Special handling may apply in California. See: www.dtsc.ca.gov/hazardouswaste/perchlorate.

## Special Precautions

<table>
<thead>
<tr>
<th>Protective equipment:</th>
<th>None normally required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventilation:</td>
<td>Natural is sufficient for normal use</td>
</tr>
<tr>
<td>Precautions for handling and storage:</td>
<td>Store in a cool, dry location. Avoid crushing or extreme mechanical shock.</td>
</tr>
<tr>
<td>Other precautions:</td>
<td>Close book before striking. Strike away from face and body.</td>
</tr>
</tbody>
</table>

The information accumulated herein is believed to be accurate, but is not warranted to be. Recipients are advised to confirm in advance of need that the information is current, applicable and suitable to their circumstances.
### NEW SPECIAL PERMIT

<table>
<thead>
<tr>
<th>Application No.</th>
<th>Docket No.</th>
<th>Applicant</th>
<th>Regulation(s) Affected</th>
<th>Nature of Special Permit Thereof</th>
</tr>
</thead>
</table>
Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
1.2 Relevant identified uses of the substance or mixture and uses advised against
1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
XIAMEN LONG AFTERGLOW CO., LTD
NO. 1043, TONG JI ZHONG ROAD, TONG AN DISTRICT, XIAMEN, CHINA
Tel: 0592-3675699
E-mail: yolanda@glo-novelty.com

Only Representative / other EU contact point Not available

Further information obtainable from: XIAMEN LONG AFTERGLOW CO., LTD

1.4 Emergency telephone number:
Yolanda Hu
Tel: 0086-592-3675699

UNITED KINGDOM
National Poisons Information Service
Tel: +44 (0) 844 892 0111

1.5 Reference number: SIITY1504000006214-SH, SHATY1507843501

Section 2: hazards identification

2.1 Classification of the substance or mixture
2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008 Not applicable
- Hazard pictograms Not applicable
- Signal word Not applicable
- Hazard-determining components of labelling: Not applicable
- Hazard statements Not applicable
- Precautionary statements Not applicable

2.3 Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable
- vPvB: Not applicable

Section 3: Composition/information on ingredients

3.3 Mixtures
3.4 Technical data
3.5 Other information

(Contd. on page 2)
Safety data sheet

Trade name: Activator for glow stick

- Composition:
  - CAS: 131-11-3
  - EINECS: 205-011-6
  - dimethyl phthalate
  - substance with a Community workplace exposure limit: 89.5%
  - CAS: 7732-18-5
  - EINECS: 231-791-2
  - water
  - CAS: 7722-84-1
  - EINECS: 231-765-0
  - hydrogen peroxide
  - Index number: 008-003-00-9
  - R3: Ox, Liq. 1, H271; C Skin Corr. 1A, H314; Acute Tox. 4, H302; Acute Tox. 4, H332

SECTION 4: First aid measures

- 4.1 Description of first aid measures
  - After inhalation: Supply fresh air; consult doctor in case of complaints.
  - After skin contact:
    - Immediately wash with water and soap and rinse thoroughly.
    - If skin irritation continues, consult a doctor.
  - After eye contact:
    - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - After swallowing:
    - Rinse out mouth with water.
    - Never give anything by mouth to an unconscious person.
    - If symptoms persist consult doctor.

- 4.2 Most important symptoms and effects, both acute and delayed: No further relevant information available.

- 4.3 Indication of any immediate medical attention and special treatment needed: No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
  - Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

- 5.2 Special hazards arising from the substance or mixture: No further relevant information available.

- 5.3 Advice for firefighters
  - Protective equipment:
    - Wear fully protective suit.
    - Mouth respiratory protective device.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
  - Wear protective equipment. Keep unprotected persons away.
  - Ensure adequate ventilation.
  - Use respiratory protective device against the effects of fumes/dust/aerosol.
  - Avoid contact with eyes.
  - Avoid contact with skin.

- 6.2 Environmental precautions:
  - Do not allow to enter sewers/surface or ground water.

- 6.3 Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose contaminated material as waste according to item 13.

(Contd. on page 2)
Safety data sheet

Printing date 21.05.2015
Revision: 07.05.2015

Trade name: Activator for glow stick

(Contd. of page 2)

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
  Ensure good ventilation/exhaustion at the workplace.
  Keep receptacles tightly sealed.
  Keep away from heat and direct sunlight.
  Prevent formation of aerosols.
  Avoid contact with skin and eyes.

- Information about fire - and explosion protection:
  Protect from heat.
  Keep respiratory protective device available.

- 7.2 Conditions for safe storage, including any incompatibilities:
  Requirements to be met by storerooms and receptacles:
  Store in a cool location.
  Store only in the original receptacle.
  Information about storage in one common storage facility:
  Store away from foodstuffs.
  Store away from flammable substances.

- Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.

- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- 8.1 Control parameters
  Ingredients with limit values that require monitoring at the workplace:

  131-11-3 dimethyl phthalate (89.5%)
  |     | Limit values                  |
  |     | Short-term | Long-term |
  | WEL (Great Britain) | 10 mg/m³ | 5 mg/m³ |
  | VME (France)        | 5 mg/m³  |          |
  | MAK (Germany)       | 0.71 mg/m³ | 0.3 ppm |
  | WEL (Great Britain) | 2.8 mg/m³ | 2 ppm   |
  | VME (France)        | 1.4 mg/m³ | 1 ppm   |
  | Long-term value: 1.5 mg/m³, 1 ppm |

- DNELs: Not applicable
- PNECs: Not applicable

- Additional information: The lists valid during the making were used as basis.

- 8.2 Exposure controls
  Based on composition shown in Section 3, the following measures are suggested for occupational safety measures:
  - Appropriate engineering controls: See Section 7 for information about design of technical facilities.
  - Personal protective equipment:
  - Respiratory protection: Suitable respiratory protective device recommended.

(Contd. on page 4)
### 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>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Transparent</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Data not available</td>
</tr>
<tr>
<td>pH-value</td>
<td>Data not available</td>
</tr>
<tr>
<td>Change in condition</td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>Data not available</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>Data not available</td>
</tr>
<tr>
<td>Freezing point</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>Data not available</td>
</tr>
<tr>
<td>Flammability (solid, gaseous)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-Ignition temperature</td>
<td>Data not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Date not available</td>
</tr>
<tr>
<td>Self-igniting</td>
<td>Product is not selfigniting</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Product does not present an explosion hazard</td>
</tr>
<tr>
<td>Explosion limits</td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Data not available</td>
</tr>
<tr>
<td>Upper</td>
<td>Data not available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Data not available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Data not available</td>
</tr>
</tbody>
</table>

(Cond. on page 5)
Trade name: Activator for glow stick

- Density: Data not available.
- Relative density: Data not available.
- Vapour density: Data not available.
- Evaporation rate: Data not available.
- Solubility in / Miscibility with water: Data not available.
- Partition coefficient (n-octanol/water): Data not available.
- Viscosity:
  - Dynamic: Data not available.
  - Kinematic: Data not available.
- 9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity: No decomposition if used according to specification.
- 10.2 Chemical stability: Stable under recommended storage conditions.
- 10.3 Possibility of hazardous reactions: No dangerous reactions known.
- 10.4 Conditions to avoid: No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological Information

- 11.1 Information on toxicological effects
- Acute toxicity
  - LD/LC50 values relevant for classification:
    131-11-3 dimethyl phthalate
    - Oral LD50 6860 mg/kg (rat)
    - Dermal LD50 >23800 mg/kg (rabbit)
    7722-84-1 hydrogen peroxide
    - Oral LD50 376 mg/kg (rat)
    - Dermal LD50 3000 mg/kg (rat)
    - Inhalative LC50/4 h 2 mg/l (rat)
  - Primary irritant effect:
    - Skin corrosion/irritation: Irritating effect possible.
    - Serious eye damage/irritation: Irritating effect possible.
    - Respiratory or skin sensitisation: Sensitisation possible.
  - Additional toxicological information:
    The product is not subjected to classification according to the calculation method based on the EU Directives 67/548/EEC, 1999/45/EC and Regulation 1272/2008/EC.
    - Toxicokinetics, metabolism and distribution: Data not available
    - Acute effects (acute toxicity, irritation and corrosivity): Data not available
    - Repeated dose toxicity: Data not available
    - CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction): Data not available
SECTION 12: Ecological information

12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability: No further relevant information available.
- 12.3 Bioaccumulative potential: No further relevant information available.
- 12.4 Mobility in soil: No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- 12.6 Other adverse effects: No further relevant information available.
- 12.7 Additional ecological information:
  - General notes:
    - Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
    - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
- Recommendation: Smaller quantities can be disposed of with household waste.
- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number
- ADR, IMDG, IATA: Not applicable
- 14.2 UN proper shipping name
- ADR, IMDG, IATA: Not applicable
- 14.3 Transport hazard class(es)
- ADR, IMDG, IATA: Not applicable
- Class: Not applicable
- 14.4 Packing group
- ADR, IMDG, IATA: Not applicable
- 14.5 Environmental hazards
- Marine pollutant: No
- 14.6 Special precautions for user: Not applicable.
- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.
- UN "Model Regulation": (Contd. on page 7)
Safety data sheet

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Revision: 07.05.2015

Trade name: Activator for glow stick

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SECTION 15: Regulatory information

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

- MAK (German Maximum Workplace Concentration)
  7722-84-1 | hydrogen peroxide
  4

- National regulations:
  - Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

- Other regulations, limitations and prohibitive regulations
  - SVHC Candidate List of REACH Regulation Annex XIV Authorisation (17/12/2014)
    None of the ingredients is listed.
  - REACH Regulation Annex XVII Restriction (23/2015)
    None of the ingredients is listed.
  - REACH Regulation Annex XIV Authorisation List (14/8/2014)
    None of the ingredients is listed.

- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

- Relevant phrases
  - H271 May cause fire or explosion; strong oxidiser.
  - H302 Harmful if swallowed.
  - H314 Causes severe skin burns and eye damage.
  - H332 Harmful if inhaled.
  - R20/22 Harmful by inhalation and if swallowed.
  - R35 Causes severe burns.
  - R5 Heating may cause an explosion.
  - R8 Contact with combustible material may cause fire.


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The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Abbreviations and acronyms:
- ADR: Accidents of Dangerous Goods by Road
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (REACH)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- Ox. Liq. 1: Oxidising Liquids, Hazard Category 1
- Acute Tox. 3: Acute toxicity, Hazard Category 3
- Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

(Contd. on page 8)
Safety data sheet

Trade name: Activator for glow stick

End of document
### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
  - Trade name: Chemiluminescer for green glow stick

- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
  - Application of the substance / the mixture TOY, PARTY ITEMS, DECORATION

- **1.3 Details of the supplier of the safety data sheet**
  - Manufacturer/Supplier:
    - XIAMEN LONG AFTERGLOW CO., LTD
    - NO. 1045, TONG JI ZHONG ROAD, TONG AN DISTRICT, XIAMEN, CHINA
    - Tel: 0592-3675699
    - Email: yolanda@glo-novelty.com
  - Only Representative / other EU contact point Not available
  - Further information obtainable from: XIAMEN LONG AFTERGLOW CO., LTD

- **1.4 Emergency telephone number:**
  - Yolanda Hu
  - Tel: 0086-592-3675699

- **UNITED KINGDOM**
  - National Poisons Information Service
  - Tel: +44 (0) 844 892 0111

- **1.5 Reference number:** SHATY150400006246-SH: SHATY1507841901

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
  - Classification according to Regulation (EC) No 1272/2008

  ! GHS07

  - Acute Tox. 4 H302: Harmful if swallowed.
  - Skin Irrit. 2 H315: Causes skin irritation.
  - Eye Irrit. 2 H319: Causes serious eye irritation.

  - Classification according to Directive 67/548/EEC or Directive 1999/45/EC

  - Xn: Harmful

  - R22: Harmful if swallowed.

  - Xi: Irritant

  - R36/38: Irritating to eyes and skin.

- **Information concerning particular hazards for human and environment:**
  - The product has to be labelled due to the calculation procedure of Regulation (EC) No 1272/2008.

- **Classification system:**

- **2.2 Label elements**
  - Labelling according to Regulation (EC) No 1272/2008
  - The product is classified and labelled according to Regulation (EC) No 1272/2008.

- **Hazard pictograms**

  ! GHS07

- **Signal word Warning**

(Contd. on page 2)
Safety data sheet


Trade name: Chemiluminescer for green glow stick

- Hazard determining components of labelling:
  butyl benzate

- Hazard statements
  H302 Harmful if swallowed.
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.

- Precautionary statements
  P101 If medical advice is needed, have product container or label at hand.
  P102 Keep out of reach of children.
  P103 Read label before use.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P321 Specific treatment (see on this label).
  P301+P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
  P332+P331 IF skin irritation occurs: Get medical advice/attention.
  P301 Dispose of contents/container in accordance with local/regional/national/international regulations.

- 2.3 Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable
  - vPvB: Not applicable

SECTION 3: Composition/information on ingredients

- 3.2 Mixtures
- Description:
  Mixture of the substances listed below with non-hazardous additions.
  For the wording of the listed risk phrases refer to section 16.

- Composition:
  CAS: 136-50-7
  EINECS: 205-252-7
  butyl benzate

  CAS: 75435-51-9
  EINECS: 278-124-1
  Bis(2,5,5-trichloro-6-(pentyl oxy) carbonyl phenyl) oxalate

  CAS: 10075-85-1
  9,10-Bis(phenylvinyl)anthracene

SECTION 4: First aid measures

- 4.1 Description of first aid measures
- General information:
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation:
  Supply fresh air and to be sure call for a doctor.
  In case of unconsciousness place patient stably in side position for transportation.
- After skin contact:
  Immediately wash with water and soap and rinse thoroughly.
  If skin irritation continues, consult a doctor.
- After eye contact:
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing:
  Rinse out mouth with water.

(Cond. of page 3)
Safety data sheet

Printing date 21.05.2013
Revision: 07.05.2015

Trade name: Chemiluminescer for green glow stick

Never give anything by mouth to an unconscious person.
Call for a doctor immediately.

- 4.2 Most important symptoms and effects, both acute and delayed:
  No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed:
  No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media:
  - Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- 5.2 Special hazards arising from the substance or mixture:
  No further relevant information available.
- 5.3 Advice for firefighters:
  - Protective equipment:
    - Wear fully protective suit.
    - Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures:
  - Wear protective equipment. Keep unprotected persons away.
  - Ensure adequate ventilation.
  - Keep away from ignition sources.
  - Use respiratory protective device against the effects of fumes/dust/aerosol.
  - Avoid contact with eyes.
  - Avoid contact with skin.
- 6.2 Environmental precautions:
  - Do not allow to enter sewers/surface or ground water.
- 6.3 Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose of contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
- 6.4 Reference to other sections:
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling:
  - Ensure good ventilation/or exhaustion at the workplace.
  - Keep receptacles tightly sealed.
  - Keep away from heat and direct sunlight.
  - Prevent formation of aerosols.
  - Avoid contact with skin and eyes.
- Information about fire - and explosion protection:
  - Normal measures for preventive fire protection.
- 7.2 Conditions for safe storage, including any incompatibilities:
  - Requirements to be met by storerooms and receptacles:
    - Store in a cool location.
    - Store only in the original receptacle.
- Information about storage in one common storage facility:
  - Store away from foodstuffs.
  - Store away from flammable substances.
  - Store away from oxidising agents.

(Cond. on page 4)
Safety data sheet

Trade name: Chemiluminescer for green glow stick

Do not store together with alkaline materials.
- Further information about storage conditions:
  Keep container tightly sealed.
  Store in cool, dry conditions in well sealed receptacles.
- 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- 8.1 Control parameters
  - Ingredients with limit values that require monitoring at the workplace:
    The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - DNELs: Not applicable
  - PNECs: Not applicable
- 8.2 Exposure controls
  - Based on composition shown in Section 3, the following measures are suggested for occupational safety measures:
    - Appropriate engineering controls:
      Keep away from foodstuffs, beverages and feed.
      Immediately remove all soiled and contaminated clothing.
      Wash hands before breaks and at the end of work.
      Avoid contact with the eyes and skin.
      See Section 7 for information about design of technical facilities.
  - Personal protective equipment:
    - Respiratory protection:
      In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
  - Protection of hands:
    - Protective gloves
      The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
      Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
    - Material of gloves:
      The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
    - Penetration time of glove material:
      The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
    - Eye protection:
      - Tightly sealed goggles

(Contd. on page 5)
### SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid, Green</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Data not available</td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>Data not available</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>Data not available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Data not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Data not available</td>
</tr>
<tr>
<td>Auto-Ignition temperature</td>
<td>Data not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Data not available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Product does not present an explosion hazard</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>Data not available</td>
</tr>
<tr>
<td>Lower</td>
<td>Data not available</td>
</tr>
<tr>
<td>Upper</td>
<td>Data not available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Data not available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Data not available</td>
</tr>
<tr>
<td>Density:</td>
<td>Data not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Data not available</td>
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<tr>
<td>Vapour density</td>
<td>Data not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
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</tr>
<tr>
<td>Solubility in / Miscibility with water</td>
<td>Data not available</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Data not available</td>
</tr>
<tr>
<td>Viscosity:</td>
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</tr>
<tr>
<td>Dynamic</td>
<td>Data not available</td>
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<tr>
<td>Kinematic</td>
<td>Data not available</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Data not available</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Data not available</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

- **10.1 Reactivity**: No decomposition if used according to specification.
- **10.2 Chemical stability**: Stable under recommended storage conditions.
- **10.3 Possibility of hazardous reactions**: No dangerous reactions known.
- **10.4 Conditions to avoid**: No further relevant information available.
- **10.5 Incompatible materials**: Strong oxidizing agents, Strong bases.
Safety data sheet

Trade name: Chemiluminescer for green glow stick

10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
11.1.1 Acute toxicity
LD/LC50 values relevant for classification:

- LD50: 735 mg/kg (rat)
- LD50: 4000 mg/kg (rabbit)

Primary irritant effect:
- Skin corrosion/irritation Irritant to skin and mucous membranes.
- Serious eye damage/irritation Irritating effect.
- Respiratory or skin sensitisation Sensitization possible.

Additional toxicological information:
The product is not subjected to classification according to the calculation method based on the EU Directives 67/548/EEC, 1999/45/EC and Regulation 1272/2008/EC.
Harmful
Irritant
Toxicokinetics, metabolism and distribution Data not available
Acute effects (acute toxicity, irritation and corrosivity) Data not available
Repeated dose toxicity Data not available
CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction) Data not available

SECTION 12: Ecological information

12.1 Aquatic toxicity No further relevant information available.
12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.
12.5 Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
12.6 Other adverse effects No further relevant information available.
12.7 Additional ecological information:
- General notes:
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
13.1.1 Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
### SECTION 14: Transport information

- **14.1 UN-Number**
  - ADR, IMDG, IATA: Not applicable

- **14.2 UN proper shipping name**
  - ADR, IMDG, IATA: Not applicable

- **14.3 Transport hazard class(es)**
  - ADR, IMDG, IATA
  - Class: Not applicable

- **14.4 Packing group**
  - ADR, IMDG, IATA: Not applicable

- **14.5 Environmental hazards**
  - Marine pollutant: No

- **14.6 Special precautions for user**
  - Not applicable.

- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - Not applicable.

- **UN “Model Regulations”**

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - MAK (German Maximum Workplace Concentration)
    - None of the ingredients is listed.

- **National regulations:**
  - Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

- **Other regulations, limitations and prohibitive regulations**
  - SVHC Candidate List of REACH Regulation Annex XIV Authorisation (17/12/2014)
    - None of the ingredients is listed.

  - REACH Regulation Annex XVII Restrictions (2/3/2015)
    - None of the ingredients is listed.

  - REACH Regulation Annex XIV Authorization List (14/8/2014)
    - None of the ingredients is listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

- **Relevant phrases**
  - H302: Harmful if swallowed.
  - H315: Causes skin irritation.
  - H319: Causes serious eye irritation.
  - R22: Harmful if swallowed.
  - R36/38: Irritating to eyes and skin.
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Abbreviations and acronyms:
ADP: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LD50: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LD50: Lethal dose, 50 percent
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/irritation, Hazard Category 2

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