1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Glow Light Stick
Product Use: Entertainment, field lighting

Supplier Information
Company Name: ZHEJIANG GUANGYUAN TOYS CO., LTD
Address: RD11 LONGJIANG, ZHONGSHAN INDUSTRIAL PUJIANG, ZHEJIANG, CHINA
Tel: 0086-579- 84235891
Fax: 0086-579- 84235896
Email: gytoys@vip.163.com
Emergency Telephone: 0086-579- 84235891

2. HAZARDS IDENTIFICATION

Physical/Chemical Hazards
This product is not classified as dangerous according to Directive 1999/45/EC as amended and adapted.
This product is not hazardous according to the criteria specified in 29CFR 1910.1200 (Hazard Communication Standard).

Human health hazards
Eyes: Irritation may occur following exposure to a leaking product.
Skin: Irritation may occur following exposure to a leaking product, and may be harmful if absorbed through the skin.
Ingestion: Not anticipated. May cause irritation to the internal/external mouth area following exposure to a leaking product.
Inhalation: Not anticipated. Respiratory irritation may occur if vapors are released due to heat or an abundance of leaking products.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation: Preparation

Plastic article contains chemiluminescence and activator components.
<table>
<thead>
<tr>
<th>Material Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Conc. [%]</th>
<th>EU Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetyl tributyl citrate (ATBC)</td>
<td>77-90-7</td>
<td>201-067-0</td>
<td>30-40</td>
<td>-</td>
</tr>
<tr>
<td>Triethyl citrate</td>
<td>77-93-0</td>
<td>201-070-7</td>
<td>50-70</td>
<td>-</td>
</tr>
<tr>
<td>Bis[2,3,5-trichloro-6-{(pentyl oxy)carbonyl}phenyl] oxalate</td>
<td>75203-51-9</td>
<td>278-124-1</td>
<td>1-5</td>
<td>-</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>7722-84-1</td>
<td>231-765-0</td>
<td>0.1-2</td>
<td>R5-O;R8-C;R35-Xn; R20/22</td>
</tr>
</tbody>
</table>

### Dye of Liquid in stick

<table>
<thead>
<tr>
<th>Dye of Liquid in stick</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Conc. [%]</th>
<th>EU Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPEN (blue)</td>
<td>110904-87-5</td>
<td>-</td>
<td>0.08</td>
<td>-</td>
</tr>
<tr>
<td>DBEA (yellow)</td>
<td>51749-83-8</td>
<td>-</td>
<td>0.08</td>
<td>-</td>
</tr>
<tr>
<td>9,10-bis(phenylvinyl)anthracene (green)</td>
<td>10075-85-1</td>
<td>233-210-8</td>
<td>0.08</td>
<td>-</td>
</tr>
<tr>
<td>N,N-dibutyl-5,6,12,13-tetrakis(4-(1,1-dimethylycithyl)Phenoxy -3,4,9,10-perylenedicarboximide (red)</td>
<td>112100-07-9</td>
<td>-</td>
<td>0.08</td>
<td>-</td>
</tr>
<tr>
<td>9,10-Diphenylantracene(purple)</td>
<td>1499-10-1</td>
<td>216-105-1</td>
<td>0.08</td>
<td>-</td>
</tr>
<tr>
<td>N,N-dibutyl-5,6,12,13-tetrakis(4-(1,1-dimethylycithyl)Phenoxy -3,4,9,10-perylenedicarboximide(orange)</td>
<td>-</td>
<td>-</td>
<td>0.08</td>
<td>-</td>
</tr>
<tr>
<td>N,N-dibutyl-5,6,12,13-tetrakis(4-(1,1-dimethylycithyl)Phenoxy -3,4,9,10-perylenedicarboximide(pink)</td>
<td>-</td>
<td>-</td>
<td>0.08</td>
<td>-</td>
</tr>
</tbody>
</table>

**Note:**
1: Full text of risk phrases appearing in section 3: see section 16.
2: This MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of the product.
4. FIRST AID MEASURES

**Eyes:** If the product is leaking or ruptured, contents may irritate eyes. Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if irritation develops or persists.

**Skin:** If the product is leaking or ruptured, contents may irritate skin. Rinse exposed area with large amounts of water for at least 15 minutes. Get medical attention if irritation develops or persists.

**Ingestion:** If the product is leaking or ruptured, contents may irritate mouth. Rinse mouth and surrounding area with clear, tepid water for at least 15 minutes. Get Medical assistance if irritation develops or persists.

**Inhalation:** If the product is leaking or ruptured, contents may irritate the respiratory tract. Remove to fresh air. Get medical assistance if symptoms develop or persist.

5. FIRE FIGHTING MEASURES

<table>
<thead>
<tr>
<th>Flash Point:</th>
<th>NA</th>
<th>Method Used:</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Flammable Limit (UFL):</td>
<td>NA</td>
<td>Lower Flammable Limit (LFL):</td>
<td>NA</td>
</tr>
</tbody>
</table>

**General Fire Hazards**
This product is not combustible.

**Hazardous Combustion Products**
Carbon monoxide, carbon dioxide.

**Extinguishing Media**
Water spray, dry chemical, or carbon dioxide, as appropriate.

**Fire Fighting Equipment/Instructions**
Wear appropriate protective equipment including self contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

**Containment Procedures**
None

**Clean-Up Procedures**
In the event of rupture, prevent skin and eyes contact.
Absorb with inert absorbent such as dry clay, sand, diatomaceous earth, or commercial sorbents. Scoop up used absorbent into drums or other appropriate container.
Dispose of spent absorbent in an approved industrial waste landfill.

Evacuation Procedures
None

Special Procedures
None

7. HANDLING AND STORAGE

Handling Procedures
If the product is leaking or ruptured, avoid skin and eyes contact with the leaking contents. Do not crush, puncture or incinerate the product.

Storage Procedures
Keep the container tightly closed to prevent contact from moisture.
Store this product in a cool, dry, well-ventilated place.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls: Use exhaust ventilation to keep airborne concentration below exposure limit.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Peroxide</td>
<td>1 ppm (TWA), A3: Animal carcinogen.</td>
<td>-</td>
<td>1 ppm (TWA).</td>
</tr>
</tbody>
</table>

Engineering Controls
Not normally required. If the product is leaking or ruptured, use general ventilation or use local exhaust, where possible, in confined or enclosed spaces.

Personal Protective Equipment
Eyes/face: Not normally required. If the product is leaking or ruptured, wear safety glasses with side shields, chemical goggles (if splashing is possible).
Skin: Not normally required. If the product is leaking or ruptured, wear appropriate protective gloves to prevent skin exposure.

Respiratory: Not normally required. If the product is leaking or ruptured, wear an organic vapor respirator for concentrations exceeding the Occupational Exposure Limit.

General: Wash fountain is recommended. Good personal hygiene practices should always be followed.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Plastic tube consisting of liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Color</td>
<td>yellow, blue, green, orange, red, pink, purple (if actived)</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>NA</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>NA</td>
</tr>
<tr>
<td>Solubility (H₂O)</td>
<td>Immiscible (contents)</td>
</tr>
<tr>
<td>Specific Gravity (H₂O = 1)</td>
<td>~1.05</td>
</tr>
<tr>
<td>pH</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>NA</td>
</tr>
<tr>
<td>Melting point</td>
<td>NA</td>
</tr>
<tr>
<td>Freezing point</td>
<td>NA</td>
</tr>
<tr>
<td>VOC content</td>
<td>None</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: No available information

Hazardous Polymerization: Will not occur.

Incompatibility: No available information.

Hazardous Decomposition: Carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

See section 3 for potential health effects.
Toxicity Data:
No toxicity data have been established for this product. However, toxicity data for ingredients are stated below:

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>Toxicity data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetyl tributyl citrate</td>
<td>&gt; 30 ml/kg oral - rat LD50; &gt; 50 ml/kg oral - cat LD50; &gt; 4 gm/kg interperitoneal - mouse LD50; 12600 mg/kg/14 day(s) intermittent intraperitoneal - mouse TDLo</td>
</tr>
<tr>
<td>Triethyl citrate</td>
<td>Inhalation, rat: LC50 = 1300 ppm/6H; Oral, rat: LD50 = 5900 mg/kg; Skin, rabbit: LD50 = &gt; 5 gm/kg.</td>
</tr>
</tbody>
</table>

Carcinogenicity
Component Carcinogenicity
None of this product’s components are classified as carcinogens by IARC, NTP.

Sensitization: No data available for this product.
Mutagenicity: No data available for this product.
Teratogenicity: No data available for this product.

12. ECOLOGICAL INFORMATION

Germany water class: Not determined for this product, but some ingredients are stated below:

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>the WGK class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen peroxide</td>
<td>1 (low hazard to waters)</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Waste disposal must be in accordance with appropriate Federal, State, and local regulations.

14. TRANSPORT INFORMATION

DOT UN Status: Not regulated as a hazardous material or dangerous goods for transportation.
UN PROPER SHIPPING NAME: Not regulated as a hazardous material or dangerous goods for transportation.
UN HAZARD CLASS/DIVISION: Not regulated as a hazardous material or dangerous goods for transportation.
UN IDENTIFICATION NUMBER: Not regulated as a hazardous material or dangerous goods for transportation.

UN PACKING GROUP: Not regulated as a hazardous material or dangerous goods for transportation.

**15. REGULATORY INFORMATION**

Directive 1999/45/EC (classification and labeling):
- Hazard Symbols: -
- R Phrases: -
- S Phrases: -

Inventory Status
- Inventory Status
- United States (TSCA): One or more ingredients are on the inventory or exempt from listing.
- Europe (EINECS): One or more ingredients are on the inventory or exempt from listing.

**16. OTHER INFORMATION**

Risk phrases in section 3:
- **R5**: Heating may cause an explosion.
- **R8**: Contact with combustible material may cause fire.
- **R20/22**: Harmful by inhalation and if swallowed.
- **R35**: Cause severe burns.

**Issue Date:** 2011-3-4

This information and these recommendations are offered in good faith and believed to be correct as of the date hereof. Information and recommendations are supplied upon the condition that the recipients will make their own decision as to safety and suitability for their purposes. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, are made with respect to the product or the information and recommendations. We make no representation as to completeness or accuracy. In no event shall we be responsible for damages of any nature whatsoever resulting from the use or reliance upon the information and recommendations.

* * * END OF MSDS * * *