

SAFETY DATA SHEET

1. Product and Company Identification

Red Emergency Flare - No Perchlorate (NPC) Formulation

Identification:

The NPC flare will have the following symbol on it:

Synonyms: Emergency Road Flare
Railway Flare
NSN#: 1370-01-009-2593



Identified Use: Emergency signal

Use Advised Against: Do not use indoors or inside a vehicle

Manufacturers Information Orion Safety Products
28320 St. Michaels Rd
Easton, MD 21601
800-637-7807
410-822-0318

EMERGENCY

CHEMTREC
1-800-424-9300

2. Hazards Identification

GHS Classifications

Skin Irritation	Category 2	H315
Eye Irritation	Category 2A	H319
STOT - Single Exposure	Category 3	H335

GHS Label Elements

Pictograms



Signal Word

Warning

Hazard Statements

H315 /319 Causes skin and serious eye irritation
H335 May cause respiratory irritation

Precautionary Statements

P103 Keep out of reach of children
P261 Avoid breathing dust/smoke.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective eye protection
P370 In case of fire: use water deluge
P501 Dispose of contents / container in accordance with local and national regulations.

P301/315 IF SWALLOWED: Get immediate medical advice /attention.
P302/352 IF ON SKIN: Wash with plenty of soap and water.
P304/340/342 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor / physician.
P305/338/351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333/313 If skin irritation or rash occurs, get medical advice / attention.

Hazards Not Otherwise Classified (HNOC): produces hot flame

3. Composition / Information on Ingredients

Component	CAS #	EINCS #	%age
Strontium Nitrate	10042-76-9	233-131-9	<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%
Waxy sawdust	mixture	none	<5%
Polyvinyl Chloride	9002-86-2	200-831-0	<5%
Shellac	mixture	none	<1%
Charcoal	1333-86-4	231-153-3	<1%

Note: Due to Confidential Business Information i. e "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 immediately if burned or irritation occurs.
Eyes	If contents get into eye, flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses if easily possible. Do not use boric acid to rinse with; sulfur is an acid irritant. Get medical aid immediately.
Ingestion	Get medical aid immediately.

Most important symptoms and effects both acute and delayed See section 2 labeling and section 11

Indication of any immediate medical attention and special treatment needed

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

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.		
Specific Hazards Arising from the Chemical	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.		
Further information	No data available		

6. Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures

Do not breathe contents and avoid contact with skin and eyes. Wear flame retardant clothing with long sleeves, dust mask, rubber or nitrile gloves, safety goggles, safety shoes. 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 product 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 this 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 not ignite or burn product inside a vehicle or building. Avoid inhalation of smoke. Do not dismantle. 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 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 flares 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

Exposure Limits	OSHA PEL	ACGIH TLV
Strontium Nitrate	Not Established	Not Established
Sulfur	Not Established	Not Established
Potassium Nitrate	Nuisance dust 15 mg/m ³ .	Nuisance dust 15 mg/m ³ .
Paraffinic Oil	5 mg/m ³	TWA 5 mg/m ³
Potassium Chlorate	No Airborne Exposure Limits established	No Airborne Exposure Limits established
Waxy sawdust	Not Established	Not Established
Polyvinyl Chloride	No known hazardous components above regulatory thresholds in this product.	No known hazardous components above regulatory thresholds in this product.
Shellac	Not Established	Not Established
Charcoal	Nuisance dust 15 mg/m ³ .	Nuisance dust 15 mg/m ³ .

Exposure controls

Engineering Controls

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

Personal Protective Equipment

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. Wash hands and face before eating, drinking or using tobacco products.

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

General Hygiene Use product outdoors away from combustible products. For cleanup of spilled materials, emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of hazardous materials.

9. Physical and Chemical Properties

Appearance (color, physical form, shape): Yellow to grey powder	Melting Point: Not available	Solubility: Not available
pH: Not available	Freezing Point: Not applicable	Evaporation Rate: Not applicable
Boiling Point / Range: Not applicable	Specific Gravity: Not applicable	Vapor Density: Not applicable
Vapor Pressure: Not applicable	Odor Threshold: No data available	Flash Point: Not available
Odor: No data available	Flammability Limits: No data available	Relative Density: No data available
Flammability: No data available	Viscosity: No data available	
Partition Coefficient: No data available		
Auto Ignition Temperature: 360°F		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; chlorate salts.	Hazardous Decomposition Products Carbon monoxide, carbon dioxide, sulfur oxides, and nitrogen oxides.

11. Toxicology Information

Ingredient acute toxicity information

Ingredient	Oral LD50	skin LD50	LC50
Strontium Nitrate	Rat: 2750 mg/kg	No information found	No information found
Sulfur	Rat:>2000 mg/kg	Rat:>2000 mg/kg	Rat: 79.23 mg/L 4hr
Potassium Nitrate	Rat: 3750 mg/kg	No information found	No information found
Paraffinic Oil	Rat: >2000 mg/kg	Rat: >2000 mg/kg	No information found
Potassium Chlorate	Rat: 1870 mg/kg	Rabbit: > 2000 mg/kg	No information found
Waxy sawdust	Rat: > 5000 mg/kg	not stated	not stated
Polyvinyl Chloride	Rat: > 5000 mg/kg	no known hazardous components above regulatory thresholds in this product.	no known hazardous components above regulatory thresholds in this product.
Shellac	Rat: 10000 mg/kg	No information found	No information found
Charcoal	Rat: 15400 mg/kg	Rabbit: 3 g/kg	No information found

Product toxicological information

Acute Toxicity	Not classified – <i>Acute Toxicity Estimate yields oral LD₅₀ over 5000 mg/kg bw</i>
Skin Irritation / Corrosion	Category 2 – <i>over 10% of ingredients classified as a Category 2</i>
Serious Eye Damage / Irritation	Category 2a – <i>over 10% of ingredients classified as a Category 2a</i>
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 – <i>respiratory over 10% of ingredients classified as a Category 3 respiratory STOT hazard</i>
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. Ingestion 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	<u>Strontium Nitrate:</u> <i>Acute toxicity - Fishes, Carassius auratus, LC100, 9,615 mg/l; Chronic toxicity - Fishes, Gasterosteus aculeatus, LC100, 2,912 mg/l</i> <u>Sulfur:</u> <i>Toxicity to fish LC50 - Oncorhynchus 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</i> <u>Potassium Chlorate:</u> <i>fish: LC50 oncorhynchus mykiss (rainbow trout) 1750 mg/l - 96 hr, EC50 daphnia magna (water flea) 1093 mg/l 24 hr</i> <u>Paraffinic Oil:</u> <i>Oil Mist, Mineral Lepomis macrochirus (LC50) 96 hour(s) >100 mg/l Oncorhynchus mykiss (LC50) 96 hour(s) >100 mg/l</i> <u>Potassium Nitrate:</u> <i>fish: Guppy (Poecilia Reticulata) LC50 180 mg/L (96 h); zooplankton: Daphnia magna LC50 490mg/l - 48hr</i>
Persistence / Degradability	<u>Potassium Nitrate:</u> Soluble in water Persistence is unlikely based on information available.
Bioaccumulation / Accumulation	No information found
Mobility in Environmental Media	<u>Strontium Nitrate:</u> <i>Water:: considerable solubility and mobility; Soil/sediments non-significant adsorption</i> <u>Potassium Nitrate:</u> <i>Will likely be mobile in the environment due to its water solubility.</i>
Other adverse effects	No information found

13. Disposal Considerations

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

Description	ID Number	shipping name	hazard class	packing group	EX Number	Reportable Quantities	Shipping method
Domestic Shipments							
No inner packaging	*NA1325	Fusee	4.1	II	EX1992090001	none	Ground only
Retail Packaging	**UN3178	Flammable solid, inorganic (highway flares or fusees)	4.1	II	EX2002110114	none	Ground only
International / Air							
Inner Packaging (bag)	UN0373	Signal devices, hand	1.4S		EX1992090001	none	Air / ground

* As noted on EX1992090001

** According to 49CFR, Exception for Class 4, flares properly packaged and classed as UN3178, Flammable solid, inorganic (highway flares or fusees), may be renamed "Consumer Commodity" and reclassified as ORM-D and offered for transportation and transported in accordance with the applicable provisions of that subchapter.

Marine Pollutant: no

Special precautions for user: No information available

15. Regulatory Information

US Regulations	TSCA	CERCLA	CWA	CAA	SARA 313	SARA 302	Acute	Chronic	Fire	Reactivity	Pressure
Strontium Nitrate	yes	no	no	no	no	no	yes	no	no	yes	no
Sulfur	yes	no	no	no	no	no	yes	no	yes	no	no
Potassium Nitrate	yes	no	no	no	yes	no	no	no	no	yes	no
Paraffinic Oil	yes	no	no	no	no	no	no	no	no	no	no
Potassium Chlorate	yes	no	no	no	no	no	yes	no	no	yes	no
Waxy sawdust	yes	no	no	no	no	no	no	no	no	no	no
Polyvinyl Chloride	yes	no	no	no	no	no	yes	no	no	no	no
Shellac Mixture	yes	no	no	no	yes	no	unknown	unknown	unknown	unknown	Unknown
Charcoal	yes	no	no	no	no	no	no	no	no	no	No
US States	Prop 65	NJ	PA	Canada	WHMIS		DSL	Europe	Wgk		
Strontium Nitrate	no	1743	no		C Oxidizing materials D1B Toxic materials D2B Toxic materials		yes		2		
Sulfur	no	1757	yes		B4 Flammable solid D2B Toxic materials		yes		1 / nwg		
Potassium Nitrate	no	1574	yes		C Oxidizing materials		yes		1		
Paraffinic Oil	no	1437	no		No results		yes		not listed		
Potassium Chlorate	yes	1560	yes		C Oxidizing materials D1B Toxic materials		yes		2		
Waxy sawdust	yes	No	no		No results		yes		not listed		
Polyvinyl Chloride	no	3622	no		No results		yes		not listed		
Shellac Mixture	no	No	no		No results		unknown		not listed		
Charcoal	yes	Yes	yes		D2A Very toxic materials D2B Toxic materials		yes		Nwg		

16. Other Information

Revision Information: May 2015

NFPA Rating		HMIS Rating	
Flammability	1	Flammability	1
Health	2	Health	2
Reactivity	1	Physical Hazard	1

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
 TSCA: toxic substance control act - US

CERCLA: comprehensive environmental response, compensation and liability act - US
 CWA: clean water 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

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SDS Report

No. SHATY1507841901

Date: May. 21, 2015

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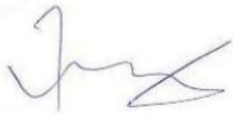
XIAMEN LONG AFTERGLOW CO.,LTD
NO. 1043, TONG JI ZHONG ROAD, TONG AN DISTRICT, XIAMEN, CHINA

SGS Ref. No. : SHTY150400006246-SH
Sample Name : Chemiluminescer for green glow stick
End Uses : TOY, PARTY ITEMS, DECORATION
Composition/Ingredient of sample (as per client submission) : See *Section 3 Composition/information on ingredients* on the SDS report
Job Receiving Date : May 04, 2015
Last Information Date : May 07, 2015
SDS Preparation Period : May 04 ~ May 08, 2015

Service Requested : Preparation of Safety Data Sheet (SDS) for the sample with submitted information.

Summary : As per request, the contents and formats of the SDS are prepared in accordance with European Commission Directives 67/548/EEC, 1999/45/EC, Regulation (EC) No 1907/2006, Regulation (EC) No 1272/2008 and Regulation (EU) No 453/2010, and is provided per attached.

Signed for and on behalf of
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.



Wei WANG, Terry
Approved Signatory



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Safety data sheet
Regulation(EC) No. 1907/2006, 1272/2008

Printing date 21.05.2015

Revision: 07.05.2015

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. 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

 - **1.5 Reference number:** SHTY150400006246-SH; SHATY1507841901
- UNITED KINGDOM
 National Poisons Information Service
 Tel: +44 (0) 844 892 0111

SECTION 2: Hazards identification

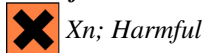
- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS07

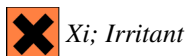
- Acute Tox. 4 H302 Harmful if swallowed.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2 H319 Causes serious eye irritation.

- **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:**

The classification is according to the latest edition of the Directives 67/548/EEC, 1999/45/EC and Regulation (EC) No. 1272/2008, and extended by company and literature data.

- **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

Regulation(EC) No. 1907/2006, 1272/2008

Printing date 21.05.2015

Revision: 07.05.2015

Trade name: Chemiluminescer for green glow stick

(Contd. of page 1)

- **Hazard-determining components of labelling:**

- butyl benzoate

- **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+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

- P332+P313 If skin irritation occurs: Get medical advice/attention.

- P501 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 nonhazardous additions.

- For the wording of the listed risk phrases refer to section 16.

- **Composition:**

CAS: 136-60-7 EINECS: 205-252-7	butyl benzoate ☒ Xn R22; ☒ Xi R36/38 ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	85,4%
CAS: 75203-51-9 EINECS: 278-124-1	Bis(2,3,5-trichloro-6-((pentyloxy)carbonyl)phenyl) oxalate	14,0%
CAS: 10075-85-1	9,10-Bis(phenylvinyl)anthracene ☒ Xi R36/37/38 ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	0,6%

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.

(Contd. on page 3)

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Trade name: Chemiluminescer for green glow stick

(Contd. of page 2)

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 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/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.

(Contd. on page 4)

Safety data sheet
Regulation(EC) No. 1907/2006, 1272/2008

Printing date 21.05.2015

Revision: 07.05.2015

Trade name: Chemiluminescer for green glow stick

(Contd. of page 3)

- 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
- **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 measure:**
- **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

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- **Environmental exposure controls:**
Control measures must be made in accordance with Community environmental protection legislation.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· Appearance:

- | | |
|------------------|---------------------|
| Form: | Liquid |
| Colour: | Green |
| Odour: | Odourless |
| Odour threshold: | Data not available. |

- | | |
|-----------|---------------------|
| pH-value: | Data not available. |
|-----------|---------------------|

· Change in condition

- | | |
|------------------------------|---------------------|
| Melting point/Melting range: | Data not available. |
| Boiling point/Boiling range: | Data not available |
| Freezing point: | Data not available |

- | | |
|--------------|--------------------|
| Flash point: | Data not available |
|--------------|--------------------|

- | | |
|--------------------------------|----------------|
| Flammability (solid, gaseous): | Not applicable |
|--------------------------------|----------------|

- | | |
|----------------------------|--------------------|
| Auto-Ignition temperature: | Data not available |
|----------------------------|--------------------|

- | | |
|----------------------------|---------------------|
| Decomposition temperature: | Date not available. |
|----------------------------|---------------------|

- | | |
|----------------|------------------------------|
| Self-igniting: | Product is not selfigniting. |
|----------------|------------------------------|

- | | |
|-----------------------|---|
| Explosive properties: | Product does not present an explosion hazard. |
|-----------------------|---|

· Explosion limits:

- | | |
|----------------------|---------------------|
| Lower: | Data not available. |
| Upper: | Data not available. |
| Oxidising properties | Data not available. |

- | | |
|------------------|---------------------|
| Vapour pressure: | Data not available. |
|------------------|---------------------|

- | | |
|------------------|---------------------|
| 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: Strong oxidizing agents, Strong bases

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- **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:**

136-60-7 butyl benzoate

Oral	LD50	735 mg/kg (rat)
Dermal	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 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 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**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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- **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
· 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 Regulation": | - |

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:**

· **Waterhazard 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 Restriction (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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The contents and format of this SDS are in accordance with REGULATION (EC) No 1272/2008, REGULATION (EC) No 1907/2006, Regulation (EU) No 453/2010 and EU Commission Directive 1999/45/EC, 67/548/EEC.

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· **Abbreviations and acronyms:**

ADR: 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 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

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

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