

Section 1: Identification**1.1 Product Identifier:** Chemiluminescent Device - All Colors Visible and Infrared

Synonyms: N/A

Chemical Abstracts Registry Number: N/A

REACH Registration Number: N/A

1.2 Identified uses:

Identified uses: Chemical light

1.3 Supplier/Manufacturer:

Cyalume Technologies, Inc.

96 Windsor St.

West Springfield, MA 01089

USA

1-888-858-7881

e-mail: info@cyalume.com**1.4 Emergency contact**

Chemtrec: 1-800-424-9300

In France: ORFILA: numéro ORFILA (INRS): + 33 (0)1 45 42 59 59

Section 2: Hazards Identification**2.1 Classification of the substance or mixture****2.1.1 Classification according to Regulation (EC) 1272/2008 (CLP) and OSHA Haz Com: CFR 1910.1200:****Hazard Statements:**

H302 Harmful if swallowed (Category 4)

H315 Causes skin irritation (Category 2)

H319 Causes serious eye irritation (Category 2A)

H332 Harmful if inhaled (Category 4)

2.1.2 Additional information:

For full text of Hazard- and EU Hazard- statements see Section 16.

2.2 GHS Label elements, including precautionary statements**Pictograms:****Signal Word:** Warning

Hazard Statements:

- H302 Harmful if swallowed (Category 4)
 H315 Causes skin irritation (Category 2)
 H319 Causes serious eye irritation (Category 2A)
 H332 Harmful if inhaled (Category 4)

Precautionary Statements:

- P234 Keep only in original container.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ eye protection/ face protection.
 P301+P330+P312 IF SWALLOWED: Rinse mouth with water. Call a POISON CENTER or doctor/physician if you feel unwell.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P304+P340+P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
 P305+P351+P388 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
 P332+P313 If skin irritation occurs: Get medical advice/ attention.
 P337+P313 If eye irritation persists: Get medical advice/ attention.
 P362+P364 Take off contaminated clothing and wash before use.
 P390 Absorb spillage to prevent material damage.
 P391 Collect spillage.
 P404 Store in a closed container.
 P406 Store in corrosive resistant container.
 P501 Dispose of contents/container to comply with local, state, and federal regulations.

2.3 Other Hazards

None known.

Section 3: Composition/Information on Ingredients**3.1 Substances**

<u>Name</u>	<u>Product Identifier</u>	<u>Weight %</u>
N/A		

3.2 Mixtures**Hazardous components**

<u>Component</u>	<u>Product Identifier</u>	<u>Weight %</u>	<u>GHS Classification</u>
------------------	---------------------------	-----------------	---------------------------

<u>Component</u>	<u>Product Identifier</u>	<u>Weight %</u>	<u>GHS Classification</u>
Polyethylene (case)		40-60%	No hazards according to OSHA and ECHA
Glass (ampoule)		0-10%	No hazards according to OSHA and ECHA
Butyl benzoate	CAS No. 136-60-7 EC No. 205-252-7	0-20%	Skin Irritation (Category 2) Eye Irritation (Category 2A)
Glycerol tribenzoate	CAS No. 614-33-5 EC No. 210-379-6	0-5%	No hazards according to OSHA and ECHA
Propylene glycol dibenzoate	CAS No. 19224-26-1 EC No. 242-894-7	0-20%	No hazards according to OSHA and ECHA
Bis(2,4,5-trichloro-6-carbopentoxyphenyl)oxalate	CAS No. 30431-54-0 EC No. 250-195-3	0.6-8%	Harmful if Swallowed (Category 4) Skin Irritation (Category 4) Respiratory Irritation (Category 4)

One or more dyes	CAS No. multiple EC No. multiple	0-0.2	No hazards according to OSHA and ECHA
Triethyl citrate	CAS No. 77-93-0 EC No. 201-070-7	7-12%	No hazards according to OSHA and ECHA
Hydrogen peroxide	CAS No. 7722-84-1 EC No.231-765-0	0.5-1.0%	No hazards according to OSHA and ECHA
Water	CAS No. 7732-18-5 EC No. 231-791-2	0.2-0.4%	No hazards according to OSHA and ECHA
Sodium salicylate	CAS No. 54-21-7 EC No. 200-198-0	0.002-1.3%	Eye Irritation (Category 2A) Harmful if swallowed (Category 4)

Section 4: First-Aid Measures

4.1 Description of first aid measures

General: Move out of hazardous area. Consult a physician.

Inhalation: Move victim to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth to mouth resuscitation.

Skin: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs, get medical advice/attention.

Eye: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue to wash with water for several minutes. If eye irritation occurs, get medical advice/attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms/injuries after skin contact: Causes skin irritation.

Symptoms/injuries after eye contact: Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

No additional information available.

Section 5: Firefighting Measures

5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special Hazards arising from the substance or mixture

Fire hazard: If this material is involved in a fire, the following can be released: Carbon monoxide, Carbon dioxide, Hydrogen chloride

Explosion hazard: No data available.

Reactivity: No data available.

5.3 Advice for firefighters

Fire Fighting Procedures: Use water spray or fog to cool exposed containers. Wear self-contained breathing apparatus.

Combustion Products: Carbon monoxide, Carbon dioxide, Hydrogen chloride

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures

6.1.1. For non-emergency personnel: Remove non-emergency personnel from the area of the spill.

6.1.2. For emergency responders: Wear respirator protection. Avoid breathing vapors, mist, or gas. For personal protection equipment, see Section 8.

6.2 Environmental precautions

Do not allow to enter drains or waterways. Notify the appropriate authorities if liquid enters sewers or public waters.

6.3 Methods and materials for containment and cleaning up:

6.3.1. Appropriate advice for containing a spill: Soak up with inert absorbent material in loose form or surround and soak up with appropriate boom. Cover drains.

6.3.2. Appropriate advice for clean-up of a spill: Neutralize spill and absorb with noncombustible absorbent material. Shovel material or place contaminated material into suitable container with cover. Dispose of as hazardous waste.

6.3.3. Other information relating to spills and releases, including inappropriate containment or clean-up techniques: For disposal see section 13.

6.4 Reference to other sections

See Section 8 for personal protection equipment. See section 13 for proper disposal.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Protective measures: Keep material away from metals.

Measures to prevent fire: N/A

Measures to prevent aerosol and dust generation: Provide good ventilation in work area.

Measures to protect environment: Keep material away from drains and ground water.

General occupational hygiene: Follow good hygiene practices. Do not eat, drink, or smoke around the material.

Wash hands after handling the material. Immediately remove contaminated clothing. Wash contaminated clothing before reuse. Use appropriate personal protection equipment. (See Section 8)

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions: Keep material away from excessive heat or cold. Store in a well-ventilated area. Keep container closed when not in use. Avoid the formation of aerosols.

Packaging materials: Store in polyethylene or polypropylene containers. Do not store in metal containers.

Requirements for storage rooms and vessels: Make sure that stored material cannot enter drains or surface water.

Storage class:

Further information on storage conditions: Keep away from direct sunlight.

7.3 Specific end uses(s)

Recommendations: See Section 1.2.

Industrial sector specific: N/A

Section 8: Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

Component	CAS No.	Value	Control parameters	Basis
Butyl Benzoate	136-60-7			Substance has no occupational exposure limits.

Components with workplace control parameters

Component	CAS No.	Value	Control parameters	Basis
Bis(2,4,5-trichloro-6-carbopentoxyphenyl)-oxalate	3012-65-5			Substance has no occupational exposure limits.

Components with workplace control parameters

Component	CAS No.	Value	Control parameters	Basis
Hydrogen peroxide	7722-84-1	TWA	1 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		TWA	1.4 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		VLEP:	1.5 mg/m ³	France

Components with workplace control parameters

Component	CAS No.	Value	Control parameters	Basis
Sodium salicylate	54-21-7		Substance has no occupational exposure limits.	

8.2 Exposure controls

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

Personal protective equipment

Eye/face protection: Use equipment for eye protection tested and approved under the appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove technique to avoid skin contact. Dispose of gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection: The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate, use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a back-up to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or ECN (EU).

Control of environmental exposure: Do not let product enter drains.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance: Article consisting of plastic tube or shape containing glass ampoule(s). Color varies depending upon the product.

Odor: No data available

Odor threshold: No data available

pH: No data available

Melting/freezing point: No data available

Initial boiling point and boiling range: No data available

Flashpoint: No data available

Evaporation rate: No data available

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limit: No data available

Vapor pressure: No data available

Vapor density (Air = 1): No data available

Relative density: No data available

Solubility(ies): Water: Solubility in water of component(s) of the mixture :

• Sodium salicylate: 124.6 g/100 mL (25 °C) • Butyl benzoate: 120 g/l (at 25 °C) • Triethyl citrate, 65 g/l • Glycerol tribenzoate: 0.002 g/l • Propylene glycol dibenzoate: insoluble • Hydrogen peroxide: miscible.

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

9.2 Other information

No additional information.

Section 10: Stability and Reactivity

10.1 Reactivity

No additional information.

10.2 Chemical Stability

This product is stable at normal handling and storage conditions.

10.3 Possibility of hazardous reactions

Keep away from strong oxidizing agents.

10.4 Conditions to avoid

Avoid extremely high or low temperatures. Avoid direct sunlight.

10.5 Incompatible materials

Keep away from strong acids, strong bases, and strong oxidizing agents.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11: Toxicological Information

11.1 Information on toxicological effects

Signs and Symptoms of Overexposure: Irritation.

Acute Effects:	Hydrogen peroxide:	orl-rat LD50: 801 mg/kg skin-rat: LD50: 2,000 mg/kg ihl-rat LD50: 2.0 mg/L/4hr
	Sodium Salicylate:	orl-rat LD50: 930 mg/kg Intraperitoneal-rat LD50: 542 mg/kg

Eye Contact: Causes eye irritation

Skin Contact: Causes skin irritation

Inhalation: Respiratory tract irritation

Ingestion: no data available

Target Organ Effects: no data available

Chronic Effects: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: not available

Section 12: Ecological Information

12.1 Toxicity

No additional information available.

12.2 Persistence and degradability

Abiotic degradation: Not available

Physical-and photochemical elimination: Not available

Biodegradation: Not available

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log KOW): Not available

Bioconcentration factor (BCF): Not available

12.4 Mobility in soil

Not available

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Other adverse effects

Not available

Section 13: Disposal Considerations

13.1 Waste disposal methods

13.1.1. Product/Packaging disposal: Dispose of unused material and containers in accordance with local/national regulations.

Waste codes/waste designations according to LoW: The valid EWC waste code numbers are source related. The manufacturer is therefore unable to specify EWC waste codes for articles or products used in various sectors.

13.1.2. Waste treatment-relevant information: Not available

13.1.3. Sewage disposal-relevant information: Do not allow product to enter drains or water supplies.

13.1.4. Other disposal recommendations: Consult local/national regulations for safe disposal.

Section 14: Transport Information

U.S. Department of Transportation (DOT)

Proper Shipping Name: Not Regulated

Hazard Class: Not Regulated

UN/NA Number: N/A

Packing Group: N/A

Labels Required: N/A

International Maritime Organization (IMDG)

Proper Shipping Name: Not Regulated

Hazard Class: Not Regulated

UN/NA Number: N/A

Packing Group: N/A
Labels Required: N/A

IATA

Proper Shipping Name: Not Regulated

Hazard Class: Not Regulated

UN/NA Number: N/A

Packing Group: N/A

Labels Required: N/A

Section 15: Regulatory Information

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

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. Regulation (EU) 453/2010.

U.S. Federal Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): N/A

Toxic Substances Control Act (TSCA): All components of this product are included on the TSCA inventory.

Clean Water Act (CWA): Consult Federal, State and local regulations for specific requirements.

Clean Air Act (CAA): Consult Federal, State and local regulations for specific requirements.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right To Know Components

Ethanedioic acid, 1,2-bis[3,4,6-trichloro-2-[(pentyloxy)carbonyl]phenyl] ester, CPPO CAS No. 30431-54-0

Pennsylvania Right To Know Components

Ethanedioic acid, 1,2-bis[3,4,6-trichloro-2-[(pentyloxy)carbonyl]phenyl] ester, CPPO CAS No. 30431-54-0

New Jersey Right To Know Components

Ethanedioic acid, 1,2-bis[3,4,6-trichloro-2-[(pentyloxy)carbonyl]phenyl] ester, CPPO CAS No. 30431-54-0

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: Other Information

Hazard Statements:

- H302 Harmful if swallowed (Category 4)
- H315 Causes skin irritation (Category 2)
- H319 Causes serious eye irritation (Category 2A)
- H332 Harmful if inhaled (Category 4)

Precautionary Statements:

- P234 Keep only in original container.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ eye protection/ face protection.
- P301+P330+P312 IF SWALLOWED: Rinse mouth with water. Call a POISON CENTER or doctor/physician if you feel unwell.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P304+P340+P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P332+P313 If skin irritation occurs: Get medical advice/ attention.
- P337+P313 If eye irritation persists: Get medical advice/ attention.
- P362+P364 Take off contaminated clothing and wash before use.
- P390 Absorb spillage to prevent material damage.
- P391 Collect spillage.
- P404 Store in a closed container.
- P406 Store in corrosive resistant container.
- P501 Dispose of contents/container to comply with local, state, and federal regulations.

HMIS Rating

Health hazard: Not available

Chronic Health Hazard: Not available

Flammability: Not available

Physical Hazard: Not available

National Fire Protection Association (NFPA) Ratings: This information is intended solely for the use of individuals trained in the NFPA system.

Health: Not available

Flammability: Not available

Reactivity: Not available

Revision Indicator: Convert to SDS format.

Disclaimer: The information contained herein is accurate to the best of our knowledge. My Company makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances.