**SAFETY DATA SHEET**
per OSHA HazCom 2012

**Revised Date: March 15, 2017**

## 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

| | |
|---|---|
| Product name: | Rhodamine 610 Chloride |
| Product Number: | 06101 |
| Product use: | For laboratory research purposes |
| Restrictions on use: | Not for drug or household use |
| Safety Sheet Supplier: | Oakley, Inc.<br>4000 Luxottica Place<br>Mason, OH 45040<br>USA |
| Telephone: | (614) 492-5610 |
| Emergency Phone: | (614) 674-4846 |
| E-mail address: | info.exciton@luxotticaretail.com |

## 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Acute toxicity, Oral (Category 4), H302
Serious eye damage (Category 1), H318
Acute aquatic toxicity (Category 3), H402
Chronic aquatic toxicity (Category 3), H412

**GHS Label elements, including precautionary statements**

Pictogram

Signal word: Danger

Hazard statement(s)

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H318 | Causes serious eye damage |
| H412 | Harmful to aquatic life with long lasting effects |

Precautionary statement(s)

| | |
|---|---|
| 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 + P312 | IF SWALLOWED: 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 |
| P330 | Rinse mouth |
| P501 | Dispose of contents/ container to an approved waste disposal plant. |

**Hazards not otherwise classified or not covered by GHS**
None

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| | |
|---|---|
| Synonyms: | N-[9-(2-carboxyphenyl)-6-(diethylamino)-3H-xanthen-3-ylidine]-N-ethyl-ethanaminium chloride<br>9-(2-Carboxyphenyl)-3,6-bis(diethylamino)xanthylium chloride |
| Formula: | C28 H31 N2 O3 . Cl |
| Molecular Weight: | 479.02 gm/mol |
| CAS-No.: | 81-88-9 |
| EC-No.: | 201-383-9 |

**Hazardous components**
N-[9-(2-carboxyphenyl)-6-(diethylamino)-3H-xanthen-3-ylidine]-N-ethyl-ethanaminium chloride

Acute Toxicity 4; Eye Damage 1; Aquatic Acute 3; Aquatic Chronic 3

## 4. FIRST AID MEASURES

**If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

**In case of skin contact**
Wash off with soap and plenty of water.

**In case of eye contact**
Flush eyes with water for 15 minutes as a precaution.

**If swallowed**
Never give anything by mouth to an unconscious person. Rinse mouth with water.

**Most important symptoms and effects, both acute and delayed**
No further relevant information available

**Indication of any immediate medical attention and special treatment needed**
No further relevant information available

## 5. FIRE-FIGHTING MEASURES

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

**Special hazards arising from the substance or mixture**
Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas

**Special protective equipment for fire-fighters**
Wear self-contained breathing apparatus for fire-fighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**
Wear personal protective equipment. Avoid dust formation. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**Environmental precautions**
Prevent further leakage of spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods and materials for containment and cleaning up**
Sweep up and shovel. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

**Conditions for safe storage**
Keep container tightly closed in a dry and well-ventilated place. Store in cool place.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

**Hygiene measures and engineering controls**
Adequate ventilation and/or containment in accordance with good laboratory practices.

**Personal protective equipment**

**Respiratory protection**
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**
Handle with impermeable gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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

**Body protection**
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| a) | Appearance | Form: crystals or powder<br>Color: green (crystals) or reddish-violet (powder) |
| b) | Odor | No data available |
| c) | Odor Threshold | No data available |
| d) | pH | No data available |
| e) | Melting point | 210-211 °C |
| f) | Initial boiling point and boiling range | No data available |
| g) | Flash point | No data available |
| h) | Evaporation rate | No data available |
| i) | Flammability | No data available |
| j) | Upper/lower flammability or explosive limits | No data available |
| k) | Vapor pressure | No data available |
| l) | Vapor density | No data available |
| m) | Relative density | No data available |
| n) | Solubility | Soluble in water |
| o) | Partition coefficient: n-octanol/water | No data available |
| p) | Auto-ignition temperature | No data available |

| | | |
|---|---|---|
| q) | Decomposition temperature | No data available |
| r) | Viscosity | No data available |

## 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| a) | Reactivity | No data available |
| b) | Chemical stability | Stable under recommended storage conditions |
| c) | Possibility of hazardous reactions | No data available |
| d) | Conditions to avoid (e.g. static discharge) | No data available |
| e) | Incompatible materials | Strong oxidizing agents |
| f) | Hazardous decomposition products | See Section 5. |

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**
LD50 I.V. Rat: 89.5mg/kg
LD50 Oral – Mouse – 887 mg/kg
LDLO Oral – Rat – 500 mg/kg

**Skin corrosion/irritation**
Skin (rabbit): no skin irritation

**Serious eye damage/eye irritation**
Eyes (rabbit): severe eye irritation

**Respiratory or skin sensitization**
No data available

**Germ cell mutagenicity**
Ames test S. typhimurium (Histidine revers)

Hamster ovary DNA damage

**Carcinogenicity**

Carcinogenicity - Rat – Subcutaneous -- Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.

Carcinogenicity - Rat – Subcutaneous -- Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.

Blood: Lymphomas including Hodgkin's disease -- Tumorigenic: Tumors at site or application.

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (9-(2-Carboxyphenyl)-3,6-bis(diethylamino)xanthylium chloride)

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**
Reproductive toxicity - Mouse - Intraperitoneal
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

**Routes of Exposure:** Inhalation, Eye contact, Ingestion, Skin contact.

**Specific target organ toxicity - single exposure**
No data available

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available

**Signs and Symptoms of Exposure**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Additional Information**
RTECS: BP3675000

Symptoms and signs of poisoning are: burning sensation, cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting

## 12. ECOLOGICAL INFORMATION

**Toxicity**

| | |
|---|---|
| Toxicity to fish | LC50 - Cyprinodon variegatus (sheepshead minnow) - 83.9 mg/l - 96 h<br>LC50 - Lepomis macrochirus (Bluegill) - 379 mg/l - 96 h<br>LC50 - Oncorhynchus mykiss (rainbow trout) - 217 mg/l - 96 h<br>Toxicity to daphnia and other aquatic invertebrates |

**Persistence and degradability**

| | |
|---|---|
| Biodegradability Result: | 0 % - not rapidly biodegradable<br>(OECD Test Guideline 302) |

**Bioaccumulative potential**

| | |
|---|---|
| Bioaccumulation | Cyprinus carpio (Carp) - 24 d<br>- 0.1 mg/l<br>Bioconcentration factor (BCF): < 0.2 |

**Mobility in soil**
No data available

**PBT and vPvB assessment**
No data available

**Other adverse effects**
No data available.

## 13. DISPOSAL CONSIDERATIONS

**Product**
Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**
Dispose of as unused product.

## 14. TRANSPORT INFORMATION

**DOT (US)**
Not dangerous goods

**IMDG**
Not dangerous goods

**IATA**
Not dangerous goods

## 15. REGULATORY 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**
Acute health hazard.

**Massachusetts Right To Know Components**
9-(2-Carboxyphenyl)-3,6-bis(diethylamino)xanthylium chloride CASRN 81-88-9

**Pennsylvania Right To Know Components**
9-(2-Carboxyphenyl)-3,6-bis(diethylamino)xanthylium chloride CASRN 81-88-9

**New Jersey Right To Know Components**
9-(2-Carboxyphenyl)-3,6-bis(diethylamino)xanthylium chloride CASRN 81-88-9

**California Prop. 65 Components**
WARNING! This product contains a chemical known to the State of California to cause cancer
9-(2-Carboxyphenyl)-3,6-bis(diethylamino)xanthylium chloride CASRN 81-88-9

## 16. OTHER INFORMATION

**HMIS Rating**

| | |
|---|---|
| Health hazard: | 2 |
| Chronic Health Hazard: | |
| Flammability: | 0 |
| Physical Hazard: | 0 |

**NFPA Rating**

| | |
|---|---|
| Health hazard: | 2 |
| Fire Hazard: | 0 |
| Reactivity Hazard: | 0 |

**Further information**

 The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Oakley, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

**Revised Date: March 15, 2017**