

# Ethidium homodimer: sc-211428



*The Power to Question*

## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Ethidium homodimer  
**Product Number:** sc-211428  
**Supplier:** Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, CA 95060  
800.457.3801 or 831.457.3800  
**Emergency:** ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

#### OSHA Hazards

Target Organ Effect, Corrosive, Carcinogen

#### Target Organs

Eyes, Skin, Lungs

#### GHS Classification

Substances, which in contact with water, emit flammable gases (Category 3)

Skin corrosion (Category 1B)

Serious eye damage (Category 1)

Carcinogenicity (Category 2)

#### GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

#### Hazard statement(s)

H261

In contact with water releases flammable gases.

H314

Causes severe skin burns and eye damage.

H351

Suspected of causing cancer.

#### Precautionary statement(s)

P231 + P232

Handle under inert gas. Protect from moisture.

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.

P310

Immediately call a POISON CENTER or doctor/ physician.

P422

Store contents under inert gas.

#### HMIS Classification

Health hazard:

3

Chronic Health Hazard:

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Flammability:

0

Physical hazards:

0

#### NFPA Rating

Health hazard:

3

Fire:

3

Reactivity Hazard:

1

### Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin burns.
<b>Eyes</b>	Causes eye burns.
<b>Ingestion</b>	May be harmful if swallowed.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms:** EthD-1  
**Formula:** C<sub>46</sub>H<sub>48</sub>N<sub>8</sub>•2Cl•2HCl  
**Molecular Weight:** 856.75

<i>CAS-No.</i>	<i>EC-No.</i>	<i>Index-No.</i>	<i>Concentration</i>
5,5'-[Ethylenebis(iminotrimethylene)]bis[3,8-diamino-6-phenylphenanthridinium] dichloride dihydrochloride 61926-22-5	263-325-9	-	-

### 4. FIRST AID MEASURES

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5. FIREFIGHTING MEASURES

#### Conditions of flammability

Not flammable or combustible.

#### Suitable extinguishing media

Dry powder

#### Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

#### Hazardous combustion products

Hazardous decomposition products formed under fire conditions - Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Hydrogen chloride gas

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

#### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water. 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. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition. No smoking.

### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Never allow product to get in contact with water during storage. Recommended storage temperature: -20 °C

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with 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 protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

Complete suit protecting against chemicals, Flame retardant protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance.

#### Hygiene measures

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	solid	pH	no data available
Melting point/range:	>= 250 °C	Boiling point	no data available
Flash point	no data available	Ignition temperature	no data available
Autoignition temperature	no data available	Lower explosion limit	no data available
Upper explosion limit	no data available	Vapor pressure	no data available
Density	no data available	Water solubility	no data available
Relative vapor density	no data available	Odor	no data available
Odor Threshold	no data available	Evaporation rate	no data available
Partition coefficient: n-octanol/water	no data available		

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

Reacts violently with water.

### Conditions to avoid

Exposure to moisture.

### Materials to avoid

Strong oxidizing agents Strong oxidizing agents, Alcohols, Acids, Bases

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions - Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas

### Other decomposition products

no data available

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

**Oral LD50** no data available

**Inhalation LC50** no data available

**Dermal LD50** no data available

**Other information on acute toxicity** no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/eye irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

Limited evidence of carcinogenicity in animal studies

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

### Teratogenicity

no data available

### Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

### Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

### Aspiration hazard

no data available

### Potential health effects

**Inhalation** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Ingestion** May be harmful if swallowed.

**Skin** May be harmful if absorbed through skin. Causes skin burns.

**Eyes** Causes eye burns.

### Signs and Symptoms of Exposure

Spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting.

### Synergistic effects

no data available

### Additional Information

RTECS: Not available

## 12. ECOLOGICAL INFORMATION

### Toxicity

no data available

### Bioaccumulative potential

no data available

### PBT and vPvB assessment

no data available

### Persistence and degradability

no data available

### Mobility in soil

no data available

### Other adverse effects

no data available

### 13. DISPOSAL CONSIDERATIONS

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

### 14. TRANSPORT INFORMATION

#### DOT (US)

UN number: 3096                      Class: 8 (4.3)                      Packing group: II  
Proper shipping name: Corrosive solids, water-reactive, n.o.s. (5,5'-[Ethylenebis(iminotrimethylene)]bis[3,8-diamino-6-phenylphenanthridinium] dichloride dihydrochloride)  
Reportable Quantity (RQ):  
Marine pollutant: No  
Poison Inhalation Hazard: No

#### IMDG

UN number: 3096                      Class: 8 (4.3)                      Packing group: II                      EMS-No: F-G, S-L  
Proper shipping name: CORROSIVE SOLID, WATER-REACTIVE, N.O.S. (5,5'-[Ethylenebis(iminotrimethylene)]bis[3,8-diamino-6-phenylphenanthridinium] dichloride dihydrochloride)  
Marine pollutant: No

#### IATA

UN number: 3096                      Class: 8 (4.3)                      Packing group: II  
Proper shipping name: Corrosive solid, water-reactive, n.o.s. (5,5'-[Ethylenebis(iminotrimethylene)]bis[3,8-diamino-6-phenylphenanthridinium] dichloride dihydrochloride)

### 15. REGULATORY INFORMATION

#### OSHA Hazards

Target Organ Effect, Corrosive, Carcinogen

#### 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, Chronic Health Hazard

#### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

#### Pennsylvania Right To Know Components

5,5'-[Ethylenebis(iminotrimethylene)]bis[3,8-diamino-6-phenylphenanthridinium] dichloride dihydrochloride                      CAS-No. 61926-22-5

#### New Jersey Right To Know Components

5,5'-[Ethylenebis(iminotrimethylene)]bis[3,8-diamino-6-phenylphenanthridinium] dichloride dihydrochloride                      CAS-No. 61926-22-5

#### 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.

### 16. OTHER INFORMATION

*The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.*

04/23/2014