1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Thiolutin
UN/ID No: 2811
Recommended use: For research use only
Supplier Address: Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)
E-mail address: technical@abcam.com
Emergency telephone: Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free) - Monday-Friday 8am-9pm EST

2. HAZARDS IDENTIFICATION

GHS - Classification

<table>
<thead>
<tr>
<th>Acute oral toxicity</th>
<th>Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

Signal Word
Danger

Hazard statements
H300 - Fatal if swallowed
3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiolutin</td>
<td>87-11-6</td>
<td>100</td>
<td>Acute Tox. 2 (H300)</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

General advice
Immediate medical attention is required.

Eye contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.

Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation
Move to fresh air.

Ingestion
Rinse mouth. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Notes to physician
Treat symptomatically.

Protection of first-aiders
Use personal protective equipment. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

Flammable properties
Not flammable.

Flash point
not determined

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Explosion Data
Sensitivity to Mechanical Impact
none.

Sensitivity to Static Discharge
none.
**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**
Use personal protective equipment. Keep people away from and upwind of spill/leak.

**Environmental precautions**
Try to prevent the material from entering drains or water courses.

**Methods for containment**
Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up**
Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Sweep up and shovel into suitable containers for disposal.

**7. HANDLING AND STORAGE**

**Advice on safe handling**
Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Remove and wash contaminated clothing before re-use. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using this product.

**Technical measures/Storage conditions**
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines**
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering measures**
- Showers
- Eyewash stations
- Ventilation systems

**Personal protective equipment**

<table>
<thead>
<tr>
<th>Eye/face protection</th>
<th>Tightly fitting safety goggles.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin and body protection</td>
<td>No special protective equipment required.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.</td>
</tr>
</tbody>
</table>

**Hygiene measures**
When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
</tr>
<tr>
<td>VOC Content(%)</td>
<td>not applicable</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Physical State @20°C</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>No information available</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>None known based on information supplied.</td>
</tr>
<tr>
<td>Hazardous polymerization</td>
<td>Hazardous polymerization does not occur.</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

- Stability
  Stable under recommended storage conditions.

- Incompatible products
  None known based on information supplied.

- Conditions to avoid
  None known based on information supplied.

- Hazardous decomposition products
  None known based on information supplied.

- Hazardous polymerization
  Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

- Acute toxicity
  Product Information
  Product is toxic by ingestion. Very toxic if swallowed.

- Ingestion
  Very toxic if swallowed

- Chronic toxicity

  - Chronic toxicity
    Prolonged or repeated exposure increases the risk Possible risks of irreversible effects

- Target Organ Effects
  None known.

12. ECOLOGICAL INFORMATION

- Ecotoxicity
  The environmental impact of this product has not been fully investigated.
13. DISPOSAL CONSIDERATIONS

Waste disposal methods
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging
Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT

<table>
<thead>
<tr>
<th>Proper shipping name</th>
<th>Excepted Quantity</th>
<th>Toxic solid, organic, n.o.s.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class</td>
<td></td>
<td>(N-(4,5-Dihydro-4-methyl-5-oxo-1,2-dithiolo[4,3-b]pyrrol-6-yl)-acetamide)</td>
</tr>
<tr>
<td>UN/ID No</td>
<td>2811</td>
<td></td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
<td></td>
</tr>
</tbody>
</table>

IATA

<table>
<thead>
<tr>
<th>UN/ID No</th>
<th>Excepted Quantity</th>
<th>Toxic solid, organic, n.o.s.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2811</td>
<td>(N-(4,5-Dihydro-4-methyl-5-oxo-1,2-dithiolo[4,3-b]pyrrol-6-yl)-acetamide)</td>
</tr>
<tr>
<td>Hazard class</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
<td></td>
</tr>
</tbody>
</table>

ADR

<table>
<thead>
<tr>
<th>Proper shipping name</th>
<th>Excepted Quantity</th>
<th>Toxic solid, organic, n.o.s.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>UN/ID No</td>
<td>2811</td>
<td></td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
<td></td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>no</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>yes</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>no</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>no</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>no</td>
</tr>
</tbody>
</table>

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).


CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

International Regulations

WHMIS Note: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
H300 - Fatal if swallowed

Hazard statements
H300 - Fatal if swallowed

Revision Date
Revision Note
11-May-2016
No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of MSDS