SAFETY DATA SHEET
Iodonitrotetrazolium chloride

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Code: 16073
Product Name: Iodonitrotetrazolium chloride
Synonyms: 2-(4-iodophenyl)-3-(4-nitrophenyl)-5-phenyl-2H-tetrazolium, monochloride; INT; Iodonitrotetrazolum violet; NSC 27620;

1.2 Relevant identified uses of the substance or mixture and uses advised against:
Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:
Company Name: Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI  48108
Web site address: www.caymanchem.com
Information: Cayman Chemical Company  +1 (734)971-3335

1.4 Emergency telephone number:
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
CHEMTREC Outside USA and Canada: +1 (703)527-3887

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:
Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.

2.2 Label Elements:
GHS Signal Word: None
GHS Hazard Phrases:
Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.
GHS Precaution Phrases:
No phrases apply.
GHS Response Phrases:
No phrases apply.
GHS Storage and Disposal Phrases:
Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.3 Adverse Human Health Effects and Symptoms:
Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>CAS # / RTECS #</th>
<th>Hazardous Components (Chemical Name)/REACH Registration No.</th>
<th>Concentration</th>
<th>EC No./EC Index No.</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>146-68-9 NA</td>
<td>2-(4-iodophenyl)-3-(4-nitrophenyl)-5-phenyl-2H-tetrazolium chloride</td>
<td>100.0 %</td>
<td>205-676-2 NA</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

Multi-region format
### Section 4. First Aid Measures

<table>
<thead>
<tr>
<th>4.1 Description of First Aid Measures:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In Case of Inhalation:</strong></td>
</tr>
<tr>
<td><strong>In Case of Skin Contact:</strong></td>
</tr>
<tr>
<td><strong>In Case of Eye Contact:</strong></td>
</tr>
<tr>
<td><strong>In Case of Ingestion:</strong></td>
</tr>
</tbody>
</table>

### Section 5. Fire Fighting Measures

<table>
<thead>
<tr>
<th>5.1 Suitable Extinguishing Media:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5.2 Unsuitable Extinguishing Media:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A solid water stream may be inefficient.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5.3 Explosive Limits:</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEL: No data.</td>
</tr>
<tr>
<td>UEL: No data.</td>
</tr>
</tbody>
</table>

### Section 6. Accidental Release Measures

<table>
<thead>
<tr>
<th>6.1 Protective Precautions, Protective Equipment and Emergency Procedures:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid raising and breathing dust, and provide adequate ventilation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6.2 Environmental Precautions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take steps to avoid release into the environment, if safe to do so.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6.3 Methods and Material For Containment and Cleaning:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contain spill and collect, as appropriate.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7.1 Precautions To Be Taken in Handling:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid breathing dust/fume/gas/mist/vapours/spray.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7.2 Precautions To Be Taken in Storing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep container tightly closed.</td>
</tr>
</tbody>
</table>

### Section 7. Handling and Storage

<table>
<thead>
<tr>
<th>7.1 Precautions To Be Taken in Handling:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid prolonged or repeated exposure.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7.2 Precautions To Be Taken in Storing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store in accordance with information listed on the product insert.</td>
</tr>
</tbody>
</table>

### Section 8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>8.1 Exposure Parameters:</th>
</tr>
</thead>
</table>
8.2 Exposure Controls:

8.2.1 Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

8.2.2 Personal protective equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment: NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Maintenance Practices: Do not take internally.

Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.

Wash thoroughly after handling.

No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States: [ ] Gas [ ] Liquid [ X ] Solid

Appearance and Odor: A crystalline solid

pH: No data.

Melting Point: No data.

Boiling Point: No data.

Flash Pt: No data.

Evaporation Rate: No data.

Flammability (solid, gas): No data available.

Explosive Limits: LEL: No data. UEL: No data.

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): No data.

Specific Gravity (Water = 1): No data.

Solubility in Water: No data.

Solubility Notes: ~0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2); ~30 mg/ml in EtOH; ~0.5 mg/ml in DMSO.

Octanol/Water Partition Coefficient: No data.

Autoignition Pt: No data.

Decomposition Temperature: No data.

Viscosity: No data.

9.2 Other Information

Percent Volatile: No data.

Molecular Formula & Weight: C19H13IN5O2 • Cl 505.7
SAFETY DATA SHEET
Iodonitrotetrazolium chloride

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.
10.2 Stability: Unstable [ ] Stable [ X ]
10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.
10.4 Conditions To Avoid: No data available.
10.5 Incompatibility - Materials strong oxidizing agents
To Avoid:
10.6 Hazardous Decomposition or carbon dioxide carbon monoxide
Byproducts: hydrogen chloride gas hydrogen iodide nitrogen oxides

Section 11. Toxicological Information

11.1 Information on Toxicological Effects:
The toxicological effects of this product have not been thoroughly studied.

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>146-68-9</td>
<td>2-(4-Iodophenyl)-3-(4-nitrophenyl)-5-phenyl-2H-tetrazolium chloride</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.
12.2 Persistence and Degradability: No data available.
12.3 Bioaccumulative Potential: No data available.
12.4 Mobility in Soil: No data available.
12.5 Results of PBT and vPvB assessment: No data available.
12.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):
DOT Proper Shipping Name: Not dangerous goods.
DOT Hazard Class: UN/NA Number:
14.1 LAND TRANSPORT (European ADR/RID):
ADR/RID Shipping Name: Not dangerous goods.
UN Number: Hazard Class:
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**Iodonitrotetrazolium chloride**

**14.3 AIR TRANSPORT (ICAO/IATA):**

**ICAO/IATA Shipping Name:** Not dangerous goods.

**Additional Transport Information:** Transport in accordance with local, state, and federal regulations.

**Section 15. Regulatory Information**

**EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists**

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>S. 302 (EHS)</th>
<th>S. 304 RQ</th>
<th>S. 313 (TRI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>146-68-9</td>
<td>2-(4-Iodophenyl)-3-(4-nitrophenyl)-5-phenyl-2H-tetrazolium chloride</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**CAS #** 146-68-9  
**Hazardous Components (Chemical Name):** 2-(4-Iodophenyl)-3-(4-nitrophenyl)-5-phenyl-2H-tetrazolium chloride  
**Other US EPA or State Lists:**  
- CAA HAP, ODC: No;  
- CWA NPDES: No;  
- TSCA: Yes - Inventory;  
- CA PROP.65: No

**Regulatory Information Statement:** This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.

**Section 16. Other Information**

**Revision Date:** 07/05/2018

**Additional Information About This Product:** No data available.

**Company Policy or Disclaimer:** DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.