Material Safety Data Sheet
Ipratropium bromide monohydrate MSDS

Section 1: Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name: Ipratropium bromide monohydrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog Codes: SL1606</td>
</tr>
<tr>
<td>CAS#: 66985-17-9</td>
</tr>
<tr>
<td>RTECS: Not available.</td>
</tr>
<tr>
<td>TSCA: TSCA 8(b) inventory: No products were found.</td>
</tr>
<tr>
<td>CI#: Not available.</td>
</tr>
<tr>
<td>Synonym: (endo,syn)-(±)-3-(3-Hydroxy-1-oxo-phenylpropoxy)-8-methyl-8-(1-methylethyl)-8-azoniabicyclo[3.2.1]octane bromide</td>
</tr>
<tr>
<td>Chemical Name: Not available.</td>
</tr>
<tr>
<td>Chemical Formula: C20H30BrNO3</td>
</tr>
</tbody>
</table>

Contact Information:
Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396
US Sales: 1-800-901-7247
International Sales: 1-281-441-4400
Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300
International CHEMTREC, call: 1-703-527-3887
For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ipratropium bromide monohydrate</td>
<td>66985-17-9</td>
<td>100</td>
</tr>
</tbody>
</table>

Toxicological Data on Ingredients: Ipratropium bromide monohydrate LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects: Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.
**Skin Contact:**
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

**Serious Skin Contact:**
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Serious Inhalation:** Not available.

**Ingestion:**
Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Serious Ingestion:** Not available.

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**Section 5: Fire and Explosion Data**

<table>
<thead>
<tr>
<th>Flammability of the Product:</th>
<th>May be combustible at high temperature.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-Ignition Temperature:</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash Points:</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammable Limits:</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Products of Combustion:** These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...), halogenated compounds.

**Fire Hazards in Presence of Various Substances:** Not available.

**Explosion Hazards in Presence of Various Substances:**
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:**
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

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**Section 6: Accidental Release Measures**

**Small Spill:**
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:**
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.
Section 7: Handling and Storage

**Precautions:**
Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes.

**Storage:**
Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Section 8: Exposure Controls/Personal Protection

**Engineering Controls:**
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:**
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid. (Solid crystalline powder.)

**Odor:** Not available.

**Taste:** Not available.

**Molecular Weight:** 4304 g/mole

**Color:** White.

**pH (1% soln/water):** Not available.

**Boiling Point:** Decomposes.

**Melting Point:** 231°C (447.8°F)

**Critical Temperature:** Not available.

**Specific Gravity:** Not available.

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.
Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibility with various substances:** Not available.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** No.

Section 11: Toxicological Information

**Routes of Entry:** Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:**
LD50: Not available.  
LC50: Not available.

**Chronic Effects on Humans:** Not available.

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Not available.

Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are more toxic.

**Special Remarks on the Products of Biodegradation:** Not available.
Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).
Identification: Not applicable.
Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: No products were found.
Other Regulations: Not available.
Other Classifications:
WHMIS (Canada): Not controlled under WHMIS (Canada).
DSCL (EEC): R36/38- Irritating to eyes and skin.
HMIS (U.S.A.):
  Health Hazard: 2
  Fire Hazard: 1
  Reactivity: 0
  Personal Protection: E
National Fire Protection Association (U.S.A.):
  Health: 2
  Flammability: 1
  Reactivity: 0
  Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent.
Splash goggles.

Section 16: Other Information

References: Not available.
Other Special Considerations: Not available.
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