SAFETY DATA SHEET: METHACHOLINE CHLORIDE

1. IDENTIFICATION

Product Name: METHACHOLINE CHLORIDE
Synonyms: o-Acetyl-beta-methylcholine chloride; Acetyl-B-methylcholine chloride
Formula and Formula Weight: C8H18ClNO2  195.69
Integra numbers beginning with: M561.30
Recommended Use: Commercial/industrial use
Restrictions on Use: No information available

INTEGRA Chemical Company
24 Hour Emergency Response: CHEMTREC 800-424-9300 (Outside USA 703-527-3887)
1216 6th Ave N
Kent WA  98032
Phone: 253-479-7000

2. HAZARDS IDENTIFICATION

OSHA Classification:
Acute Toxicity - Oral: 4 Harmful if swallowed.
Skin Corrosion/Irritation: 2 Causes skin irritation.
Eye Damage/Irritation: 2A Causes serious eye irritation.
Specific Target Organ Toxicity (single exposure): 3 May cause respiratory irritation.

Signal Word: Warning

Precautionary Statements
Prevention:
Avoid breathing dust, fume, gas, mist, vapors, spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear eye protection, face protection, protective gloves.

Response
If swallowed: Call a poison center, doctor if you feel unwell.
If on skin: Wash with plenty of water.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a poison center, doctor if you feel unwell.
Specific treatment (see first aid section on this label)
Rinse mouth.
If skin irritation occurs: Get medical advice, attention.
If eye irritation persists: Get medical advice, attention.
Take off contaminated clothing and wash it before reuse.

Storage
Store locked up in a well ventilated place. Keep container tightly closed.

Disposal
Dispose of contents, container in accordance with all governmental regulations.

Hazards Not Otherwise Classified: No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Synonyms</th>
<th>CAS #</th>
<th>% Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methacholine chloride</td>
<td>o-Acetyl-beta-methylcholine chloride</td>
<td>00062-51-1</td>
<td>100</td>
</tr>
</tbody>
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4. FIRST AID MEASURES

Inhalation: Remove person to fresh air and keep comfortable for breathing.
Eye Contact: Flush eyes with water for at least 15 minutes. Remove contact lenses, if present and easy to do. If irritation persists, seek medical attention.
Skin Contact: Wash with soap and water. Seek medical attention if irritation develops.
Ingestion: If conscious, rinse mouth and give victim large amounts of water. Seek medical attention.
Additional notes: Symptoms and effects include skin, eye, respiratory irritation; may be harmful if swallowed.
5. FIRE-FIGHTING MEASURES
Extinguishing Media: Water spray, carbon dioxide, dry chemical or foam.
Special Equipment and Precautions: Use water to cool nearby containers and structures. Wear full protective equipment, including suitable respiratory protection.
Specific Hazards: None identified

6. ACCIDENTAL RELEASE MEASURES
Spill Procedures: Prevent spread of spill. Sweep or scoop into suitable disposal container.

7. HANDLING AND STORAGE
Incompatible Materials: Incompatible with strong oxidizers.
Storage and Handling: Store locked up in a cool, dry, well-ventilated area away from incompatible materials. Keep containers tightly closed and protect them from physical damage. Material is extremely hygroscopic. Keep well closed. Store in freezer at -20 to 0°C. Avoid breathing dust, fume, gas, mist, vapors, spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear eye protection, face protection, protective gloves.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION
OSHA & ACGIH Exposure Limits:
- Methacholine chloride - None identified
Engineering Controls: Use adequate general or local exhaust ventilation to keep fume and/or dust levels as low as possible.
Respiratory Protection: If use generates annoying or irritating dusts, mists or vapors, use a NIOSH approved respirator with a particulate filter.
Skin/Eye Protective Equipment: Safety goggles, protective clothing and gloves appropriate for the risk of exposure. Facilities storing or utilizing this material should have readily accessible eyewash stations and safety showers. Select respirators and other safety equipment in accordance with regulations and based upon the particular conditions of use and risk of exposure. Always use safe chemical-handling and good industrial hygiene practices.

9. PHYSICAL AND CHEMICAL PROPERTIES
- Appearance: White powder or crystals
- Odor: Not available
- Odor Threshold: Not available
- pH: Not available
- Melting/Freezing Point: 171-173 °C
- Initial Boiling Point and Boiling Range: Not available
- Flash Point: Not available
- Evaporation Rate: Not available
- Flammability: Not available
- Flammable or Explosive: Upper: Not available Lower: Not available
- Limits (% by volume in air): Not available
- Vapor Pressure: Not available
- Vapor Density: Not available
- Relative Density: Not available
- Solubility: Soluble in water
- Partition Coefficient: n-octanol/water Not available
- Auto-Ignition Temperature: Not available
- Decomposition Temperature: Not available
- Viscosity: Not available

10. STABILITY AND REACTIVITY
- Reactivity: No information available
- Stability: Stable
- Possibility of Hazardous Reactions: Hazardous polymerization will not occur
- Conditions to Avoid: Moisture.
- Incompatibles: Incompatible with strong oxidizers.

11. TOXICOLOGICAL INFORMATION
Effects of Over Exposure:
- Inhalation: Inhalation may irritate the nose, throat and upper respiratory tract.
- Skin Contact: Contact may cause skin irritation.
- Eye Contact: Contact may be irritating to the eyes.
- Ingestion: May be harmful if swallowed.
12. ECOLOGICAL INFORMATION

Aquatic Toxicity Data:
Methacholine chloride
Persistence and degradability: No information available
Bioaccumulative potential: No information available
Mobility in soil: No information available
Other adverse effects: No information available

Terrestrial Toxicity Data:
Methacholine chloride
No information available

13. DISPOSAL CONSIDERATIONS

Disposal Procedures: Dispose of material and containers in accordance with all local, state and federal regulations.

14. TRANSPORTATION INFORMATION

This product is not a regulated material for domestic ground transportation.

Environmental hazards: No information available
Special precautions: No information available
Bulk transport: No information available

15. REGULATORY INFORMATION

Methacholine chloride is listed in the TSCA inventory.

16. OTHER INFORMATION

OSHA SDS #: 25918 rev 101 7.6.2015

NE = Not established, NA = Not applicable or Not available
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***** END OF SDS *****