1. PRODUCT DESCRIPTION

Product Name: Iodine Tincture
Product Code(s): 86-9121, 86-9123, 84-0520, 84-1137, 95-7500
Size: 30 mL, 100 mL, 500 mL
Chemical Name: Product is a mixture
CAS Number: See section 2
Formula: See section 2
Synonyms: None known
Distributor: Carolina Biological Supply Company
2700 York Road
Burlington, NC 27215

Chemical Emergency Information:
800-227-1150 (8 am–5 pm [ET] M–F)
Chemtrec (Transportation Spill Response 24 hours):
800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Principal Hazardous Components:
Ethanol (CAS #64-17-5) 48%
Iodine (CAS #7553-56-2) 2%
Sodium Iodide (CAS #7681-82-5) 2.4%
Methyl isobutyl ketone (CAS #108-10-1) 4%

TLV and PEL units:
Ethanol ACGIH TLV: 1000 ppm OSHA PEL: 1000 ppm
Iodine ACGIH TLV: 0.1 ppm OSHA PEL: 0.1 ppm (TWA) ceiling
Methyl isobutyl ketone ACGIH TLV: 50 ppm OSHA PEL: 50 ppm STEL 75 ppm

3. HAZARD IDENTIFICATION

Emergency Overview:
Potential Health Effects:
Eyes: May cause irritation.
Skin: May cause irritation.
Ingestion: May cause gastrointestinal discomfort.
Inhalation: May cause irritation to respiratory tract.

4. FIRST AID MEASURES

Emergency and First Aid Procedures:
Eyes: Flush with water for at least 15 minutes, raising and lowering eyelids occasionally. Get medical attention if irritation persists.
Skin: Thoroughly wash exposed area for at least 15 minutes. Remove contaminated clothing. Launder contaminated clothing before reuse. Get medical attention if irritation persists.

Ingestion: If swallowed, if conscious, give plenty of water. Immediately call a physician or poison control center. Never give anything by mouth to an unconscious person.
Inhalation: Remove to fresh air. Give oxygen if breathing is difficult; give artificial respiration if breathing has stopped. Keep person warm, quiet, and get medical attention.

5. FIREFIGHTING PROCEDURES

Flash Point (Method Used): 54°F.
NFPA Rating: None established.
Extinguisher Media: Use dry chemical, CO₂ or appropriate foam.
Flammable Limits in Air % by Volume: 3.3-19 (ethanol).
Autoignition Temperature: 793°F.
Special Firefighting Procedures: Firefighters should wear full protective equipment and NIOSH-approved self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: Flammable. Vapors are heavier than air and may travel distances to an ignition source and flash back.

6. SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:
Ventilate area of spill. Eliminate all sources of ignition. Remove all non-essential personnel from area. Clean-up personnel should wear proper protective equipment and clothing. Absorb material with suitable absorbent and put into a proper container.

7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Store away from heat, sparks, and open flame in a tightly closed container.
Other Precautions: Do not ingest.

8. SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type): A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.
Ventilation: Local Exhaust: Yes
Mechanical (General): No
Special: No
Other: No
Protective Gloves: Rubber, neoprene, PVC, or equivalent.

(continued)
Eye Protection: Splash-proof chemical safety goggles should be worn at all times.
Other Protective Clothing or Equipment: Lab coat, eye wash, and safety shower.

9. PHYSICAL DATA
Molecular Weight: 500 mL.
Melting Point: No information available.
Boiling Point: No information available.
Vapor Pressure: No information available.
Vapor Density (Air=1): 1.59 (ethanol).
Specific Gravity (H2O=1): No information available.
Evaporation Rate (H2O=1): Greater than 1.
Solubility in Water: Completely.
Appearance and Odor: Dark brown liquid with fruity odor.

10. REACTIVITY DATA
Stability: Stable.
Conditions to Avoid: Heat, sparks, open flame.
Incompatibility (Materials to Avoid): Oxidizers.
Hazardous Decomposition Products: Thermal decomposition may produce carbon dioxide and/or carbon monoxide.
Hazardous Polymerization: Will not occur.

11. TOXICITY DATA
Toxicity Data: Ethanol orl-rat LD50: 7060 mg/kg
Methyl Isobutyl Ketone orl-rat LD50: 5080 mg/kg
Iodine orl-rat LD50: 14 g/kg
Sodium Iodide orl-rat LD50: 4340 mg/kg
Effects of Overexposure:
Acute: See section 3.
Chronic: May cause respiratory problems, headache, nausea, and diarrhea. Breathing vapors may cause drowsiness.
Conditions Aggravated by Overexposure: May cause irritation to eyes, skin, and respiratory tract.
Target Organs: Respiratory.
Primary Route(s) of Entry: Ingestion.

12. ECOLOGICAL DATA
EPA Waste Numbers: D002 U161.

13. DISPOSAL INFORMATION
Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

14. TRANSPORT INFORMATION
Description: Flammable liquids, n.o.s. (ethanol, methyl isobutyl ketone), 3, UN1993, II

15. REGULATORY INFORMATION
EPA TSCA Status: On TSCA Inventory RTECS ON CD-ROM.
Hazard Category for SARA Section 311/312 Reporting: Acute.

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<thead>
<tr>
<th>Product or Components</th>
<th>SARA EHS</th>
<th>Chemicals</th>
<th>CERCLA RCRA</th>
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<tr>
<td>Ethanol</td>
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<tr>
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16. ADDITIONAL INFORMATION
The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Number Chemical Abstracts Service Number.
DOT U.S. Department of Transportation.
IARC International Agency of Research on Cancer.
N/A Not Available.
NTP National Toxicology Program.
OSHA Occupational Safety and Health Administration.
PEL Permissible Exposure Limit.
ppm Parts per million.
SARA Superfund Amendments and Reauthorization Act.
TLV Threshold Limit Value.
TSCA Toxic Substances Control Act.