



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

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MSDS No.: IX0190
Effective Date: January 11, 2007

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	Iodine Solution, Tincture
Chemical Synonyms	Tincture Of Iodine
Formula	Mixture.
Unit Size	up to 3.785 Lt.
C.A.S. No.	Mixture.

 NFPA HAZARD RATING MINIMAL SLIGHT MODERATE SERIOUS SEVERE 0 1 2 3 4	CHEMTREC 800-424-9300 Day 585-226-6177	<table border="1"> <tr> <td>Health</td> <td>3</td> </tr> <tr> <td>Fire</td> <td>3</td> </tr> <tr> <td>Reactivity</td> <td>2</td> </tr> </table>	Health	3	Fire	3	Reactivity	2
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Fire	3							
Reactivity	2							
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SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Ethyl alcohol (denatured): (CAS No. 64-17-5)* Water: (CAS No. 7732-18-5)	~ 78.0% 10.98%	1000 ppm; 1880 mg/m ³ None established.
Iodine: (CAS No. 7553-56-2) Potassium iodide: (CAS No. 7681-11-0)	7.39% 5.28%	C 0.1 ppm; 1 mg/m ³ None established.

DANGER! FLAMMABLE! CORROSIVE!

MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED. CAUSES BURNS.

SECTION III PHYSICAL DATA

Melting Point (°F)	Freezing point -80°C (-112°F)	Specific Gravity (H ₂ O = 1)	Approx. 0.79 (20/20°C)
Boiling Point (°F)	74.5 to 79.5°C (163-174°F)	Percent Volatile by Volume (%)	81%
Vapor Pressure (mm Hg)	Ca 50 @ 20°C (Ethyl alcohol)	Evaporation Rate (Ether =1)	> 1
Vapor Density (Air=1)	Ca 1.5 (Ethyl alcohol)		
Solubility in Water	Complete.		
Appearance & Odor	Deep-amber color liquid; mild alcohol characteristic odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	70°F (21°C) TCC	Flammable Limits in Air % by Volume	Lower: 4.0% (V) Upper: 20.0% (V)
Extinguisher Media	Water spray; carbon dioxide (CO ₂); dry chemical.		

SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing.

(2004 EMERGENCY RESPONSE GUIDEBOOK, RSPA P 5800.9, GUIDE PAGE NO. 127)

UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous decomposition products. Iodine vapor, violet in color, is corrosive to metals and to all body tissues. Alcohol burns with a clear, almost invisible flame, especially hard to see in strong sunlight.

* Denaturants:
Methyl alcohol: (CAS No. 67-56-1)...TWA: 200 ppm; STEL: 250 ppm, Methyl isobutyl ketone: (CAS No. 108-10-1)...TWA: 50 ppm; 75 ppm, Isopropyl alcohol: (CAS No. 67-63-0)...TWA: (400 ppm); STEL: (500 ppm)

D.O.T. Ethanol, 3, UN1170, PG II, Ltd Qty ≤ 1 Lt.

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA IX0190

Threshold Limited Value	None established for this solution. Methanol TWA: 200 ppm; 262 mg/m ³ . Ethanol TWA: 1000 ppm; 1880 mg/m ³ . Methyl Isobutyl Ketone TWA: 50 ppm; 205 mg/m ³ .
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Effects of Overexposure	Contact as Iodine fumes or solution is intensely irritating to eyes, skin and mucous membranes. May cause delayed lung injury. Exercise appropriate procedures to minimize potential hazards. INGESTION: May cause abdominal pain, vomiting, diarrhea, dizziness, drowsiness. In severe cases purging, excessive thirst and circulatory failure may develop. Target organs: Eyes, central nervous system, liver, kidneys.
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Emergency and First Aid Procedures	INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person. EYES: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. SKIN: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
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SECTION VI REACTIVITY DATA

Stability	Unstable	Conditions to Avoid	Excessive temperature or heat.
	Stable	X	
Incompatibility (Materials to Avoid)	Strong oxidizers. Contact of gaseous ammonia or its solutions with iodine should be avoided to prevent the formation of the explosive "nitrogen iodide". Sodium azide, Sodium hydride.		

Hazardous Decomposition Products	When heated, emits toxic and corrosive fumes of iodine.
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Hazardous Polymerization	Conditions to Avoid
May Occur	Will Not Occur
	X
Not applicable.	

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled	Remove all sources of ignition, provide adequate ventilation. Absorb spill in vermiculite, sand, earth, paper towel and place in a suitable container for disposal. Wash spill area with 5-10% Sodium thiosulfate solution.
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Waste Disposal Method	Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Dispose of in an approved chemical landfill or dispose of in an approved incinerator equipped with an afterburner and scrubber.
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SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type)	For normal laboratory use at room temperature, none should be needed. If needed, for fume or spray work in ventilation hood or wear an OSHA-approved respirator.		
Ventilation	Local Exhaust	Recommended.	Special
	Mechanical (General)	Recommended.	Other
			No.

Protective Gloves	Rubber.	Eye Protection	Chemical safety glasses.
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Other Protective Equipment	Smock, apron, eye wash station, goggles, ventilation hood, proper gloves.
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SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing	Store in a cool, dry, well-ventilated area, away from any fire hazards. Wash thoroughly after handling.
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Other Precautions	Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.
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Avoid breathing vapor. Use with adequate ventilation.
Remove and wash contaminated clothing.

Revision No. 11	Date 01/11/07	Approved James A. Bertsch	Chemical Safety Coordinator JAB
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