



# MATERIAL SAFETY DATA SHEET

1533 W. Henrietta Rd.  
Avon, New York 14414  
(716) 226-6177

MSDS No. CC 200  
Effective Date February 3, 1999

## SECTION V HEALTH HAZARD DATA

CC 200

### Threshold Limited Value

None established for this mixture.

### Effects of Overexposure

**INHALATION:** Prolonged exposure to high concentration or repeated exposures to low concentrations causes CNS depression and may result in liver or kidney and possible cardiac sensitization. **EYES:** Contact with eyes causes irritation and may be painful. **SKIN:** Prolonged or repeated contact causes defatting and cracking of the skin. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

### Emergency and First Aid Procedures

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration or if breathing is difficult, give oxygen by trained personnel. Get immediate medical attention. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Flush thoroughly with water, then wash with mild soap and water. **INGESTION:** If conscious and able to swallow, have victim drink several glasses of water. Call physician or Poison Control Center immediately. Never give anything by mouth to an unconscious or convulsing person.

## SECTION VI REACTIVITY DATA

Stability	Unstable	Conditions to Avoid
	Stable	

Open flame, excessive temperature and heat.

Incompatibility (Materials to Avoid)	Excessive water, strong alkalis, oxidizing materials.
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Hazardous Decomposition Products	Phosgene, Hydrochloric Acid, Carbon Dioxide, and/or Carbon Monoxide.
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Hazardous Polymerization	Conditions to Avoid	
		May Occur

## SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled	Wear suitable protective clothing and have good ventilation, absorb spill with an inert dry material, and place in suitable container for disposal. Wash spill area with soap and water.
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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.
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Dispose of in an approved incinerator equipped with an afterburner and scrubber.

## SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type)	None needed in normal laboratory handling. If misty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved respirator.
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Ventilation	Local Exhaust	Recommended.	Special	No.
	Mechanical (General)	Recommended.	Other	No.

Protective Gloves	Rubber.	Eye Protection	Chemical safety glasses.
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Other Protective Equipment	Goggles, face shield, lab coat, ventilation hood, proper gloves, fire extinguisher, eye wash station.
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## SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing	Store in a cool, dry, well-ventilated place, preferably not above 30°C (86°F). Wash thoroughly after handling. Avoid contact with skin, eyes and mucous membranes. Keep container tightly closed when not in use.
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**Other Precautions** Read label on container before using. Do not wear contact lenses when working with chemicals.

Avoid breathing vapors. Use with adequate ventilation. Laboratory studies have shown chloroform, a component of this product produces cancer in animals. Handle as a suspected carcinogen. Chronic exposure may cause embryo-fetal injury. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Revision	No. 9	Date	2/3/99	Approved	Michael Raszeja	Chemical Safety Coordinator	MR
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The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. \* Hazardous Materials Industrial Standards. Printed on recycled paper.

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	CARNOY'S SOLUTION
Chemical Synonyms	Carnoy's Solution (Lebrun)
Formula	Mixture *
Unit Size	up to 3.785 Lt.
C.A.S. No.	Mixture.

	CHEMTREC 800-424-9300 Day 716-226-6177	Health	3
		Fire	4
	NFPA HAZARD RATING	Reactivity	2
	LEAST SLIGHT MODERATE HIGH EXTREME	HMIS *	
	0 1 2 3 4		

## SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
*Ethyl Alcohol, Denatured: (CAS No. 64-17-5)	59%	1000 ppm;1880 mg/m <sup>3</sup>
Chloroform: (CAS No. 67-66-3)	30%	10,A2 ppm; 49,A2 mg/m <sup>3</sup>
Acetic Acid, Glacial: (CAS No. 64-19-7)	11%	10 ppm, 25 mg/m <sup>3</sup>

**DANGER! FLAMMABLE! MAY BE HARMFUL IF INHALED OR SWALLOWED. CAUSES IRRITATION ON CONTACT. CONTAINS CHLOROFORM, A SUSPECTED CARCINOGEN. CAN CAUSE ADVERSE REPRODUCTIVE EFFECTS.**

## SECTION III PHYSICAL DATA

Melting Point (°F)	Approx. -65°C (-85°F)	Specific Gravity (H <sub>2</sub> O = 1)	1.0 @ 20°C
Boiling Point (°F)	Unknown: range 61°-118°C (141°-244°F)	Percent Volatile by Volume (%)	100%
Vapor Pressure (mm Hg)	(Chloroform) 100 mm @ 10.4°C	Evaporation Rate (Ether =1)	Greater than 1.
Vapor Density (Air=1)	(Chloroform) 4.12		
Solubility in Water	Approximately 70 mL. Carnoy's Solution per 100 mL. water.		
Appearance & Odor	Clear, colorless liquid; mild, sweet, vinegar odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	(Ethyl Alcohol) 14°C (57°F)	Flammable Limits in Air % by Volume Ethyl Alc.	Lower	Upper
			3.3%	19%

Extinguisher Media	Water spray; carbon dioxide (CO <sub>2</sub> ); dry chemical (ABC).
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### SPECIAL FIREFIGHTING PROCEDURES

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

\* Denaturants:  
Methanol: (CAS No. 67-56-1)  
Methyl Isobutyl Ketone: (CAS No. 108-10-1)  
Isopropyl alcohol: (CAS No. 67 -63 -0)

### UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous decomposition products; can react vigorously with oxidizing materials. **NOTE:** Burns with a clear, almost invisible flame, especially hard to see in strong sunlight.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 128)

D.O.T. Flammable liquids, n.o.s., (Ethyl alcohol), 3, UN 1993, PG II

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