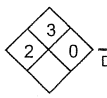


# MATERIAL SAFETY DATA SHEET

(513) 860-4949

 MSDS No.: EE0075  
 Effective Date: January 5, 2007

SECTION I	NAME	24 HOUR EMERGENCY ASSISTANCE						
Product	Ethyl Alcohol, Denatured	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><b>CHEMTREC</b> 800-424-9300 Day 585-226-6177</p> <p><b>NFPA</b></p> <p>HAZARD RATING MINIMAL SLIGHT MODERATE SERIOUS SEVERE 0 1 2 3 4</p> </div> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td>Health</td><td>1</td></tr> <tr><td>Fire</td><td>3</td></tr> <tr><td>Reactivity</td><td>0</td></tr> </table> <p><b>HMIS *</b></p> </div>	Health	1	Fire	3	Reactivity	0
Health	1							
Fire	3							
Reactivity	0							
Chemical Synonyms	Ethanol, Denatured, Anhydrous							
Formula	Mixture.							
Unit Size	up to 20 Lt.							
C.A.S. No.	Mixture.							

SECTION II	INGREDIENTS OF MIXTURES
Principal Component(s)	% TLV Units
Ethyl alcohol, denatured: (CAS No. 64-17-5)	90.4% PEL/TLV 1000 ppm
Isopropyl alcohol: (CAS No. 67-63-0)	5.0% None established.
Methyl alcohol: (CAS No. 67-56-1)	4.5% TWA: 200 ppm; STEL: 250 ppm (skin)
<b>DANGER! FLAMMABLE!</b> MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED. VAPOR HARMFUL.	

SECTION III	PHYSICAL DATA
Melting Point (°F)	-114°C (-173°F) * Specific Gravity (H <sub>2</sub> O = 1) 0.794 @ 60°F
Boiling Point (°F)	78°C (163-174°F) * Percent Volatile by Volume (%) 100%
Vapor Pressure (mm Hg)	Ca 44.6 @ 68°F * Evaporation Rate (Butyl acetate =1) 4.1
Vapor Density (Air=1)	Ca 1.59 *
Solubility in Water	Complete.
Appearance & Odor	Clear, colorless, mobile liquid; mild characteristic odor.

SECTION IV	FIRE AND EXPLOSION HAZARD DATA
Flash Point (Method Used)	(12.7°C) 55°F TCC. Flammable Limits in Air % by Volume Pure Ethyl Alc. Lower Upper 3.3 (Et. Alc.) 19.0 (Et. Alc.)
Extinguisher Media	Water spray, carbon dioxide; dry chemical; alcohol-type, or universal-type foams.

### SPECIAL FIREFIGHTING PROCEDURES

Wear a NIOSH/MSHA-approved self-contained breathing apparatus and protective clothing. Water spray may be used to keep fire exposed containers cool.  
Autoignition Temperature: 363°C (685°F)

(2004 EMERGENCY RESPONSE GUIDEBOOK, RSPA P 5800.7, GUIDE PAGE NO. 127)

### UNUSUAL FIRE AND EXPLOSION HAZARDS

Vapors formed from this product may travel or be moved by air currents and ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharge, or other ignition sources at location distant from handling point. **CAUTION:** Flame may not be visible in daylight. Fire or excessive heat may produce hazardous decomposition products; can react vigorously with oxidizing materials.

\* Pure Ethyl alcohol

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
<b>Threshold Limited Value</b>	Ethyl Alcohol TWA: 1000 ppm; Isopropyl alcohol: TWA: 400 ppm STEL: 500 ppm; Methyl alcohol TWA: 200 ppm STEL: 250 ppm. (ACGIH 1992-93).

<b>Effects of Overexposure</b>	<b>INGESTION:</b> Causes dizziness, drowsiness, decreased reaction, euphoria, nausea, vomiting, staggering gait, and coma. <b>INHALATION:</b> May cause dizziness, drowsiness, nausea and vomiting, inability to concentrate and irritation of the throat. <b>SKIN CONTACT:</b> Irritation and defatting of skin on prolonged contact. <b>EYE CONTACT:</b> May cause blindness. Target organs: Eyes, central nervous system, liver, kidneys.
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<b>Emergency and First Aid Procedures</b>	<b>INGESTION:</b> 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. <b>EYES:</b> 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. <b>SKIN:</b> Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. <b>INHALATION:</b> 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								
<b>Stability</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: black; color: white;"><b>Unstable</b></td> <td style="width: 20px;"></td> <td style="background-color: black; color: white;"><b>Conditions to Avoid</b></td> <td>Heat, fire, ignition source. Strong oxidizers.</td> </tr> <tr> <td style="background-color: black; color: white;"><b>Stable</b></td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> </table>	<b>Unstable</b>		<b>Conditions to Avoid</b>	Heat, fire, ignition source. Strong oxidizers.	<b>Stable</b>	X		
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<b>Stable</b>	X								
<b>Incompatibility (Materials to Avoid)</b>	Contact with Acetyl chloride and strong oxidizing agents may react violently. Vapors may form flammable mixtures in air.								

<b>Hazardous Decomposition Products</b>	Thermal decomposition or burning can produce carbon monoxide and/or carbon dioxide.						
<b>Hazardous Polymerization</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: black; color: white;"><b>Conditions to Avoid</b></td> <td>Not applicable.</td> </tr> <tr> <td style="background-color: black; color: white;"><b>May Occur</b></td> <td style="text-align: center;">X</td> </tr> <tr> <td style="background-color: black; color: white;"><b>Will Not Occur</b></td> <td></td> </tr> </table>	<b>Conditions to Avoid</b>	Not applicable.	<b>May Occur</b>	X	<b>Will Not Occur</b>	
<b>Conditions to Avoid</b>	Not applicable.						
<b>May Occur</b>	X						
<b>Will Not Occur</b>							

SECTION VII	SPILL OR LEAK PROCEDURES
<b>Steps to be taken in case material is released or spilled</b>	Remove all sources of ignition, provide adequate ventilation. Absorb on vermiculite, paper, earth or other absorbent. Burn in an approved incinerator or open pit away from buildings and people.

<b>Waste Disposal Method</b>	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 incinerator or contract with a licensed waste disposal service.
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SECTION VIII	SPECIAL PROTECTION INFORMATION								
<b>Respiration Protection (Specify Type)</b>	For normal laboratory use at room temperatures none should be needed with adequate room ventilation. If required work in fume hood. Do not use in confined area.								
<b>Ventilation</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: black; color: white;"><b>Local Exhaust</b></td> <td style="text-align: center;">Recommended.</td> <td style="background-color: black; color: white;"><b>Special</b></td> <td style="text-align: center;">No.</td> </tr> <tr> <td style="background-color: black; color: white;"><b>Mechanical (General)</b></td> <td style="text-align: center;">Recommended.</td> <td style="background-color: black; color: white;"><b>Other</b></td> <td style="text-align: center;">Adequate to maintain below exposure limits.</td> </tr> </table>	<b>Local Exhaust</b>	Recommended.	<b>Special</b>	No.	<b>Mechanical (General)</b>	Recommended.	<b>Other</b>	Adequate to maintain below exposure limits.
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<b>Mechanical (General)</b>	Recommended.	<b>Other</b>	Adequate to maintain below exposure limits.						
<b>Protective Gloves</b>	Rubber.								
<b>Eye Protection</b>	Chemical safety goggles.								
<b>Other Protective Equipment</b>	Smock, apron, eye wash station, faceshield, fire extinguisher, proper gloves.								

SECTION IX	SPECIAL PRECAUTIONS
<b>Precautions to be Taken in Handling &amp; Storing</b>	Store in a cool, dry, well-ventilated area, away from any fire hazard. Store separately from oxidizing materials. Wash thoroughly after handling.
<b>Other Precautions</b>	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.  Avoid breathing vapors. Use with adequate ventilation. Avoid contact with skin, eyes and clothing. Do not take internally. Remove and wash contaminated clothing.

Revision No. 10	Date 01/05/07	Approved James A. Bertsch	Chemical Safety Coordinator JAB
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