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Note: The CHEMTREC phone number is only for emergencies involving spills, leaks, fire, exposure or accident. Please direct all other inquiries to our customer service phone number.

### Section 1 - Product Identification

A solution of reagent alcohol and water.

### Section II - Composition/Information on Components

Ingredients	CAS#	OSHA Pel	ACGIH TLV	Other Limits	%
ethanol	64-17-5	1000 ppm (TWA)	1000 ppm (TWA)		45% v/v
isopropanol	67-63-0	400 ppm (TWA)	400 ppm (STEL)		2.5% v/v
methyl alcohol	67-56-1	200 ppm (TWA)	200 ppm (TWA)		2.5% v/v

### Section III - Hazards Identification

*Overview:* Toxic by inhalation absorption or ingestion. Can not be made nontoxic. Methanol is a cumulative poison and death has been reported for ingestion of less than 30 milliliters. Causes CNS depression, headache, intoxication, dilation of the pupils, convulsions nausea, and dizziness. Unconsciousness and death may result. Methanol intoxication may produce visual disturbances and blindness.

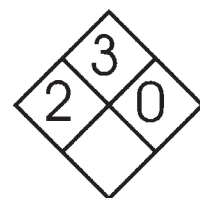
#### Safety Ratings

*Health:* Hazardous    *Flammability:* Flammable    *Reactivity:* Slight    *Contact:* Slight  
Recommended safety equipment: safety goggles, lab coat and proper gloves

*Storage:* Room Temperature away from sources of ignition.

#### NFPA Ratings

Health = 2                      Flammability = 3                      Reactivity = 1



#### Potential Health Effects

The toxicology of this compound have not been completely examined. It is presumed that the toxicity of this item is similar to other aliphatic alcohols.

*Inhalation:* Alcohols are absorbed through the mucous membranes and will produce irritation as well as the same effects as ingestion.

*Ingestion:* Inhalation will produce CNS disturbance, dizziness, photophobia, headache, stupor, coma and death.

*Skin contact:* Alcohols are absorbed through the skin. Repeated contact causes defatting of the skin with resultant irritation and flaking.

*Eye contact:* May be irritating

*Chronic Exposure:* Unknown

*Aggravation of preexisting conditions:* Impaired kidney and liver function may be aggravated by exposure to alcohols. Preexisting eye, skin, and respiratory conditions may also be aggravated. Methanol has shown genetic toxicity in some animals.

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## Section IV - First Aid Measures

*Inhalation:* Remove from source of exposure and get medical attention for any breathing difficulty.

*Ingestion:* Do not induce vomiting if patient is unconscious or extremely drowsy. Otherwise administer 2 glasses of water and induce vomiting. Get immediate medical attention even if symptoms improve.

*Skin Contact:* In case of skin contact, remove contaminated clothing and flush with water. Wash affected area with soap and water. Get medical advice if irritation develops.

*Eye Contact:* In case of eye contact, flush with water for at least 15 minutes and get medical attention.

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## Section V - Fire Fighting Measures

*Flash point:* 26°C (79°F) TCC

*Flammable Limits (for ethanol):* LEL 3% UEL 19%

*Fire:* Water is ineffective against alcohol fires but may be used to cool adjacent containers.

*Fire Extinguishing Media:* Alcohol foam, carbon dioxide or dry chemical.

*Special information:* Pyrolysis will release toxic carbon monoxide.

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## Section VI - Accidental Release Measures

Remove all sources of ignition, absorb with a suitable absorbent (such as paper towels) and dispose. The preferred disposal method is incineration. Many localities restrict the amount of alcohol that may be flushed down the drain. Insure compliance with all government regulations.

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## Section VII - Handling and Storage

Store in a closed container, away from open flames or other sources of ignition.

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## Section VIII - Exposure Control/Personal Protection

*Airborne Exposure Limits:* See section II

*Ventilation System:* Usually not required. When required, Refer to the ACGIH document, "Industrial Ventilation, a Manual of Recommended Practices" for details about ventilation.

*Personal Respirator:* Usually not required. In case of emergency, or when exposure levels are unknown, use a positive pressure, full face piece, air supplied respirator.

*Skin protection:* Protective gloves are not required but recommended as part of good laboratory practice.

*Eye Protection:* Laboratory safety goggles or similar products are not required but recommended as part of good laboratory practice.

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## Section IX - Physical and Chemical Properties

*Boiling Point:* 189°F

*Vapor pressure (mm Hg):* 40 @ 19°C

*Vapor Density (air = 1):* 1.6

*Appearance and Odor:* A clear colorless liquid with the Characteristic odor of alcohol.

*Density:* 0.93 g/ml

*Evaporation Rate (Ethanol = 1):* 1

*Solubility:* Infinitely miscible with water

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## Section X - Stability and Reactivity

*Stability:* Freezes only at very low temperature.

*Hazardous Decomposition Products:* Nothing unusual.

*Hazardous polymerization:* Will not occur.

*Incompatibilities:* Oxidizers.

*Conditions to avoid:* heat, flame and sources of ignition.

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## Section XI - Toxicological Information

Chronic consumption of ethanol is believed to be linked to liver disease, cancer and birth defects.

Cancer lists

Ingredient	Known Carcinogenicity?	NTP?	Anticipated?	IARC Category
Ethanol	no	no	no	none
Methanol	no	no	no	none
Isopropanol	no	no	no	3

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## Section XII - Ecological Information

*Environmental Fate:* Biodegradable

*Environmental Toxicity:* None expected

Ethanol evaporates quickly and is not expected to bioaccumulate. The material is removed from the air by dry and liquid adsorption. The half-life for ethanol in the atmosphere is one to ten days.

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## Section XIII - Disposal

Local governments often restrict the amounts of alcohol that may be flushed down drain. Insure compliance with all government regulation

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## Section XIV - Transportation information

*DOT Shipping name:* Ethyl alcohol solution    *Hazard Class:* 3    *Packaging Group:* II

*DOT Hazard Label:* Flammable liquid    *DOT Identification Number:* UN1170

Bottles smaller than 32 Fl. Oz. are eligible to be shipped under ORM-D or limited quantity exemptions [49 CFR section 173.150(b)(2) and 173.150(C)].

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## Section XV - Regulatory Information

### Chemical Inventory Status

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Ingredient	TSCA	EC
Ethanol	Yes	Yes
Methanol	Yes	Yes
Isopropanol	Yes	Yes

### Federal, State and International Regulations

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Chemical Weapons Convention: No    TSCA 12(b): No    CDTA: Yes

SARA 311/312: Acute: Yes, Chronic: Yes

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## Section XVI - Other Information

This information is believed to be correct but is not warranted as such, nor does it purport to be all inclusive.

Prepared by: P. B.    Revision Date: Mar. 8, 2006