

**MATERIAL SAFETY DATA SHEET**

1 OF 2

**Section I: IDENTIFICATION****Product Name: Ethanol Solution 50%**

50% DI Water

*Date Prepared:* 12/03/03 *Date Revised:* 05/05/12*Item Number(s):* 400445, 400442*Emergency Phone, Infotrac:* 800-535-5053**Section II: HAZARDOUS INGREDIENTS**

<i>Hazardous Component(s):</i>	<i>CAS Number</i>	<i>OHSA PEL, ACGIH TLV/STEL</i>		<i>NFPA</i>	
Methyl Alcohol 2.5%	67-56-1	200	200/250	Health	1
Ethyl Alcohol ~45 %	64-17-5	1000	1000/NR	Flammability	3
Isopropyl Alcohol 2.5%	67-63-0	980	980/1230	Reactivity	0

**Section III: PHYSICAL DATA**

<i>Boiling Point:</i>	~179°F	<i>Specific Gravity (H<sub>2</sub>O = 1):</i>	0.86
<i>Vapor Pressure mm Hg/20°C:</i>	96	<i>Percent Volatile by Vol:</i>	50%
<i>Vapor Density (Air 1:1):</i>	1.61	<i>Evaporation Rate (ether = 1):</i>	>3.6
<i>Solubility in H<sub>2</sub>O:</i>	Complete	<i>Appearance &amp; Odor:</i>	Clear liquid, sweet odor

**Section IV: FIRE/EXPLOSION HAZARD***Flash Point:* 56°F TCC *Flammable Limits:* LEL 3.3 UEL 19.0*Extinguishing Media:* Water spray, dry chemical, CO<sub>2</sub> and foam for alcohol*Special Fire Fighting Procedures:* Wear protective clothing with NIOSH approved breathing apparatus. Products of combustion may be harmful in a fire situation. Do not use direct water stream.*Unusual Fire & Explosion Hazards:* Eliminate sources of ignition. Burns with invisible flame.**Section V: REACTIVITY***Stability:* Stable *Material to Avoid:* Strong oxidizers, chromic anhydride, perchloric acids etc.*Hazardous Decomposition or Byproducts:* Oxides of carbon*Hazardous Polymerization:* Does not occur *Conditions to Avoid:* Excessive heat, sparks or flames**Section VI: HEALTH HAZARDS***Routes of Entry:* Inhalation, Skin and Ingestion*Acute:* Vapors may cause eyes, skin and respiratory irritation, drowsiness, nausea, headache and vomiting.*Chronic:* May cause liver, heart and kidney damage. May cause gastrointestinal disturbances and convulsions.*Carcinogenicity:* Not classified as a human carcinogen.*Signs/Symptoms of Exposure:* Vision blurring, drowsiness and headache.**HealthLink****3611 St. Johns Bluff Road, Suite 1, Jacksonville, FL 32224**

904-996-7758

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**Section VI: HEALTH HAZARDS***Emergency First Aid:*

**Skin:** Remove contaminated clothing. Wash affected area with soap and water.

**Eyes:** Thoroughly flush eyes with water. Contact a physician if irritation persist.

**Ingestion:** Rinse mouth with water, provided person is conscious and contact a physician.

**Inhalation:** Remove person to fresh air. If not breathing, give artificial respiration and contact physician.

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**Section VII: SAFE HANDLING**

*Chemical Release or Spill:* Eliminate source of ignition in the vicinity of the spill or released vapor. Isolate the spill area with sand, or other absorbent material. Place all contaminated material in closed container for disposal.

*Waste Disposal Method:* All liquid and or contaminated material should be disposed of in DOT approved waste containers. Incineration for liquids is the suggested method of disposal. Comply with all Federal, State and Local regulations for disposal.

*Precautions for Handling and Storing:* Use precautions for flammable liquids. Avoid excessive heat and sources of ignition. For large quantities, store in flammable safety cabinet. Use in well-ventilated area.

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**Section VIII: CONTROL MEASURES**

*Respiratory Protection:* Not normally required. If used in a poorly ventilated area use under an approved fume hood or NIOSH approved respirator.

*Ventilation:* Special flammable exhaust hood if vapor concentration is high. In well-ventilated areas, mechanical exhaust is sufficient.

*Protective Gloves:* Chemical resistant      *Eye Protection:* Safety Glasses

*Other Protective Clothing or Equipment:* Normal laboratory apparel suggested by Good Laboratory Practices

*Work/Hygienic Practices:* Wash thoroughly with soap and water after handling.

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**Section IX: TRANSPORT INFORMATION**

*Shipping Name:* Flammable Liquids N.O.S. (Ethanol)

*Hazard Class:* 3

*UN Number:* 1993

*PG:* II

Bottles smaller than 1 Litre 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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The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. HealthLink shall not be held liable for any damage resulting from handling or contact with this product.