

MATERIAL SAFETY DATA SHEET

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 "cutting edge science for the classroom"
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Section 1 Chemical Product and Company Information

Product	UNIVERSAL PH INDICATOR
Synonyms	Universal Indicator

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300

Section 2 Hazards Identification

Emergency Overview	<p>0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe</p> <table border="1"> <tr> <td>Health</td> <td>1</td> </tr> <tr> <td>Fire</td> <td>3</td> </tr> <tr> <td>Reactivity</td> <td>0</td> </tr> <tr> <td>Contact</td> <td>2</td> </tr> </table> <p>HMIS *</p>	Health	1	Fire	3	Reactivity	0	Contact	2
Health	1								
Fire	3								
Reactivity	0								
Contact	2								

DANGER! FLAMMABLE!
 HARMFUL IF SWALLOWED.
 Keep away from heat, sparks, flame and all other ignition sources. Avoid breathing vapor. Use with adequate ventilation. Do not get in eyes, on skin or on clothing.
 Target organs: Eyes, central nervous system, liver, kidneys.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	TLV Units (ACGIH 2001)
Ethyl alcohol, denatured*	64-17-5	76.00%	TWA: 1000 ppm
Water	7732-18-5	23.85%	None established.
Bromothymol blue	76-59-5	0.06%	None established.
Phenolphthalein	77-09-8	0.06%	None established.
Thymol blue	62625-21-2	0.005%	None established.
Methyl red	845-10-3	0.025%	None established.
*Denaturants:			
Methyl isobutyl ketone	108-10-1		TWA: 205 mg/m ³ STEL: 307 mg/m ³
Isopropyl alcohol	67-63-0		TWA: 400 ppm STEL: 500 ppm
Methyl alcohol	67-56-1		PEL-TWA: 200 ppm STEL: 250 ppm

Section 4 First Aid Measures

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.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: 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 CONTACT: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

General information: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Fires involving a small amount of combustibles may be smothered by dry chemical. 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 source. CAUTION! Flame may not be visible in daylight.

Extinguishing Media: Carbon dioxide, dry chemical, water spray, alcohol foam.

Flash Point: 21°C (70°F) TCC

Autoignition temperature: N/A

Explosion Limits: Lower: 3.3% **Upper:** 19.0%

Section 6 Accidental Release Measures

Use proper personal protective equipment as indicated in Section 8. Remove all sources of ignition. Provide adequate ventilation. Recover for use if not contaminated. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water. Avoid runoff into storm sewers and ditches which lead to waterways.

(2008 EMERGENCY RESPONSE GUIDEBOOK, (PHH50-ERG2008), GUIDE PAGE NO. 127)

Section 7 Handling & Storage FLAMMABLE STORAGE CODE RED

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.
Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale vapors, spray or mist. Wash thoroughly after handling. Remove and wash clothing before reuse.
Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8 Exposure Controls / Personal Protection

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: Use a chemical fume hood and/or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Physical state: Liquid. **** (Pure Ethanol)**
Appearance: Green.
Odor: Mild, characteristic odor.
pH: N/A
Vapor pressure (mm Hg): 44.6 mm @ 20°C (68°F)**
Vapor Density (Air = 1): 1.59**
Evaporation rate (Butyl acetate = 1): 4.1**
Viscosity: N/A
Boiling point: 75-80°C (173-174°F)**
Freezing / Melting point: -114°C (-173°F)**
Decomposition temperature: N/A
Solubility: Complete.
Specific gravity (H₂O = 1): 0.794 @ 60°F**
Percent volatile (%): 100%
Molecular formula: Mixture.
Molecular weight: Mixture.

Section 10 Stability & Reactivity

Chemical stability: Stable **Hazardous polymerization:** Will not occur.

Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatibilities with other materials: Contact with acetyl chloride and a wide range of oxidizing agents may react violently. Vapors may form flammable mixtures with air.

Hazardous decomposition products: Oxides of carbon.

Section 11 Toxicological Information

Effects of overexposure: **INGESTION:** Can cause central nervous system depression, nausea, vomiting, diarrhea. **INHALATION:** May cause headache, drowsiness, loss of appetite, inability to concentrate and irritation of the throat. **EYES:** Liquid or vapor may cause irritation. **SKIN:** May cause irritation and defatting of skin on prolonged contact. **OTHER:** Individual responses to Methyl alcohol vary, ingestion of less than 30 ml has been fatal to humans. In general a few ounces may cause blindness and death, as little as 4 ml may be toxic if ingested.

ORL-RAT LD50: N/A

IHL-RAT LC50: N/A

SKN-RBT LD50: N/A

Section 12 Ecological Information

Data not yet available.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information

UN/NA number: UN1170

Shipping name: Ethanol solution

Hazard class: 3

Packing group: II

Exceptions: Ltd Qty ≤ 1 Lt.

Section 15 Regulatory Information

For pure Ethanol: TSCA-listed, EINECS-listed (200-578-6), RCRA code D001

Section 16 Additional Information

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.

NFPA

0 = Minimal
 1 = Slight
 2 = Moderate
 3 = Serious
 4 = Severe

