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Section 1. Chemical Product and Company Identification

Catalog Numbers: 8870
Product Identity: UNIVERSAL INDICATOR
Manufacturer's Name: RICCA CHEMICAL COMPANY
Address: 448 WEST FORK DR
 ARLINGTON TX 76012
Telephone Number: 817-461-5601
Emergency Contact: Chemtrec® 800-424-9300
Date Prepared: 1999-12-21
Revision Number: 2
Revision Date: 9/17/2001

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Section 2. Composition/Information on Ingredients

Component: Ethyl Alcohol (Ethanol) -- CAS# 64-17-5
Concentration: 93-97
ACGIH TLV: 1000 ppm; 1880 mg/m3
OSHA PEL: 1000 ppm; 1900 mg/m3
Component: Methanol (Methyl Alcohol) -- CAS# 67-56-1
Concentration: 3-7
ACGIH TLV: 200ppm; 262mg/m3
OSHA PEL: 200ppm; 260mg/m3
Component: Phenolphthalein -- CAS# 77-09-8
Concentration: <0.1
ACGIH TLV: Not Available
OSHA PEL: Not Available
Component: Bromothymol Blue Sodium Salt -- CAS# 34722-90-2
Concentration: <0.1
ACGIH TLV: Not Available
OSHA PEL: Not Available
Component: 4-Dimethylaminoazobenzene (Methyl Yellow) -- CAS# 60-11-7
Concentration: < 0.1
ACGIH TLV: Not Available
OSHA PEL: Not Available
Component: Thymol Blue, Sodium Salt -- CAS# 62625-21-2
Concentration: 0.9-1.1
ACGIH TLV: Not Available
OSHA PEL: Not Available
Component: Methyl Red -- CAS# 493-52-7
Concentration: <0.1
ACGIH TLV: Not Available
OSHA PEL: Not Available

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Section 3. Hazards Identification

Emergency Overview: Flammable liquid. Primarily toxic by ingestion. If ingested, give large quantity of water and induce vomiting. Call a physician. Contact may cause dryness and cracking of the skin. May cause irritation to the eyes. Wash areas of contact with water. May cause irritation of the respiratory system. Contains Methyl Yellow, which is a suspected carcinogen. Target Organs: eyes, skin, respiratory system, central nervous system,

liver, pancreas.

Inhalation: May cause irritation of the eyes, nose and mucosa of the respiratory tract. Exposure to high concentrations can cause depression of the central nervous system with symptoms of sleepiness and lack of concentration.

Eye Contact: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva.

Skin Contact: Results in drying and cracking which can lead to secondary infections and dermatitis. Dermal absorption causes many of the symptoms of inhalation.

Ingestion: Symptoms can include sleep disorders, hallucinations, distorted perceptions, ataxia, motor function changes, convulsions and tremors, coma, headaches, pulmonary changes, alteration of gastric secretions.

Chronic Effects/Carcinogenicity: None

IARC: 4-Dimethylaminoazobenzene (Methyl Yellow) is possibly carcinogenic to humans. Phenolphthalein is possibly carcinogenic to humans. Methyl Red is unclassifiable as to carcinogenicity to humans.

NTP: Phenolphthalein - Substances or groups of substances, and medical treatments which may reasonably be anticipated to be carcinogens.

OSHA: No.

Teratology(Birth Defect) Information: Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for 4-Dimethylaminoazobenzene (Methyl Yellow).Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Methanol (Methyl Alcohol).Mutation data cited in 'Registry of

Toxic Effects of Chemical Substances' for Ethyl Alcohol (Ethanol).

Reproductive Information: Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for 4-Dimethylaminoazobenzene (Methyl Yellow).Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Methanol (Methyl Alcohol).

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Section 4. First Aid Measures -- In all cases, seek qualified evaluation
Eye Contact: Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

Skin Contact: Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops.

Ingestion: Dilute immediately with water or milk. Induce vomiting. Call a physician.

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Section 5. Fire Fighting Measures

Flammable Properties:

Flash Point: Not Available.

Method Used: Not Available.

Flammable Limits:

LFL: 3.3%

UFL: 19%

Extinguishing Media: Use dry chemical, alcohol foam, or carbon dioxide for extinguishing the surrounding fire. Use water as fog in flooding quantities. Water can be used to dilute spills to non-flammable mixtures.

Fire & Explosion Hazards: Vapors can flow along surfaces to distant ignition source and flashback. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire.

Fire Fighting Instructions: Poisonous gases are produced in fire. Continue to cool containers with water after fire is extinguished. For larger fires, use unmanned hose apparatus, if possible. Consider down wind conditions. Do not release runoff from fire-fighting measures to sewers or waterways.

Fire Fighting Equipment: Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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Section 6. Accidental Release Measures

Remove all sources of ignition. Contain spill. Do not flush to sewer. Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal in an approved waste disposal facility. Ventilate area of spill. Have extinguishing agent available in case of fire. Use non-sparking tools and equipment. Dispose of in accordance with local regulations.

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Section 7. Handling and Storage

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Store in secure, flammable storage area away from all sources of ignition. Empty containers may be hazardous since they retain product residues.

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Section 8. Exposure Controls/Personal Protection

Engineering Controls: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit. Respiratory Protection: Normal room ventilation is adequate. If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

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Section 9. Physical and Chemical Properties

Appearance: Clear, dark colored liquid

Odor: characteristic alcohol

Solubility in Water: Infinite

Specific Gravity: Approximately 0.8

pH: Not Available.

Boiling Point(°C): Approximately 77

Melting Point(°C): Approximately -110

Vapor Pressure: Not Applicable.

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Section 10. Stability and Reactivity

Chemical Stability: Stable under normal conditions of use and storage.

Incompatibility: Oxidizers, platinum, Sodium, Potassium Dioxide, Bromine

Pentafluoride, Acetyl Bromide, Acetyl Chloride, heat, sparks, open flame.
Hazardous Decomposition Products: Acrid and irritating fumes, including
toxic oxides of carbon, when heated to decomposition.
Hazardous Polymerization Will not occur.

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Section 11. Toxicological Information
LD50, Oral, Rat: (Methanol) 5628 mg/kg, (Ethanol) 7060 mg/kg,
(Phenolphthalein) >1 gm/kg, (Methyl Yellow) 200 mg/kg. Details of toxic
effects not reported other than lethal dose value.

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Section 12. Ecological Information
Ecotoxicological Information: Ethanol has moderate chronic toxicity to
aquatic life.
Chemical Fate Information: This material is not expected to significantly
bioaccumulate. Ethanol is slightly persistent in water, with a half-life
of between 2 to 20 days.

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Section 13. Disposal Considerations
Absorb with suitable inert material (vermiculite, dry sand, earth) and place
in a chemical waste container for proper disposal in an approved waste
disposal facility for incineration in a chemical incinerator equipped with
scrubber and afterburner. Ventilate area of spill. Have extinguishing agen
t available in case of fire. Eliminate all sources of ignition. Use
non-sparking tools and equipment. Always dispose of in accordance with
local, state and federal regulations.

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Section 14. Transport Information (Not meant to be all inclusive)
D.O.T. Shipping Name: Alcohols, n.o.s., (Contains: Ethanol and Methanol)
D.O.T. Hazard Class: 3
U.N. / N.A. Number: UN1987
Packing Group: II
D.O.T. Label :Flammable(3)

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Section 15. Regulatory Information (Not meant to be all inclusive -
selected regulation represented)
OSHA Status: These items meet the OSHA Hazard Communication Standard (29
CFR 1910.1200) definition of a hazardous material.
TSCA Status: All components of this solution are listed on the TSCA Inventory
or are mixtures (hydrates) of items listed on the TSCA Inventory.
Cercla Reportable Quantity: 4-Dimethylaminoazobenzene (Methyl Yellow) - 10
pounds. Methanol (Methyl Alcohol) - 5,000 pounds.
Sara Title III:
 Section 302 Extremely Hazardous Substances: No.
 Section 311/312 Hazardous Catagories: Acute, Chronic, Fire: Yes;
Pressure, Reactivity: No

Section 313 Toxic Chemicals: 0.1% DiMinimis concentration. 1.0% DiMinimis concentration.
RCRA Status: 60-11-7(4-Dimethylaminoazobenzene (Methyl Yellow))
67-56-1(Methanol (Methyl Alcohol))
California: 4-Dimethylaminoazobenzene (Methyl Yellow) (Cancer)
Phenolphthalein(Cancer)
Florida: 4-Dimethylaminoazobenzene (Methyl Yellow) is listed on Florida's Toxic Substances List. Methanol (Methyl Alcohol) is listed on Florida's Toxic Substances List. Ethyl Alcohol (Ethanol) is listed on Florida's Toxic Substances List.
Pennsylvania: 4-Dimethylaminoazobenzene (Methyl Yellow) is listed as both Special and Environmental Hazards on the state's Hazardous Substances List.Methanol (Methyl Alcohol) is listed as an Environmental Hazard on the state's Hazardous Substances List. Ethyl Alcohol (Ethanol) is listed as a Basic Hazard on the state's Hazardous Substances List.
WHMIS Information (Canada): B-2: Flammable and Combustible Material. D-2B: Poisonous and Infectious Material

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Section 16. Other Information

NFPA Ratings--

Health: 1
Flammability: 3
Reactivity: 0
Special Notice Key: None

HMIS Ratings--

Health: 1
Flammability: 3
Reactivity: 0
Protective Equipment: B (Protective Eyeware, Gloves)

Rev 1, 12-22-2000: (Section 14) removed 'Solutions' from DOT name.
Rev 2, 10-09-2001: Reformatted to electronic data format.

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.