MATERIAL SAFETY DATA SHEET

MANUFACTURER: TAYLOR TECHNOLOGIES, INC
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1. PRODUCT IDENTIFICATION
CATALOG NO.: R-0638
PRODUCT NAME: Phenolphthalein Indicator
CHEMICAL FAMILY: Alcoholic organic dye solution

2. INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>CAS NO.</th>
<th>%</th>
<th>NATURE OF HAZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>67-63-0</td>
<td>&lt;50</td>
<td>Flammable</td>
</tr>
<tr>
<td>Phenolphthalein</td>
<td>77-09-8</td>
<td>&lt;1</td>
<td>Suspect carcinogen</td>
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<tr>
<td>Deionized water</td>
<td>7732-18-5</td>
<td>to 100</td>
<td>None</td>
</tr>
</tbody>
</table>

3. PHYSICAL/CHEMICAL CHARACTERISTICS

STATE: Liquid
APPEARANCE: Clear, colorless
ODOR: Alcohol

BOILING PT (F): 180
pH: NA
SPECIFIC GRAVITY: .9
VAPOR PRESSURE (mm Hg): 25
VAPOR DENSITY (AIR=1): 1.6
PERCENT VOLATILE BY VOLUME: 99
SOLUBILITY IN WATER: Soluble

4. FIRE, EXPLOSION HAZARD AND REACTIVITY DATA

FLASH PT: 62 F
METHOD: Closed cup

FLAMMABLE LIMITS: LEL: 2% UEL: 12%

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, water spray, or alcohol foam

SPECIAL PROCEDURES: Wear self-contained (positive pressure if available)
breathing apparatus and full-protective clothing. Cool exposed containers
with water spray. Knock down vapors with water spray.

FIRE/EXPLOSION HAZARDS AND HAZARDOUS DECOMPOSITION PRODUCTS: Vapors
flammable. May be ignited by heat, sparks, or flames. May emit toxic fumes.

NFPA CODE: Health: 1 Flammability: 3 Reactivity: 0 Specific: NA
CONDITIONS TO AVOID: Extreme heat, temperatures. Protect from sparks,
flames, oxidizers.

5. HEALTH HAZARD DATA

INGREDIENT: Isopropyl alcohol

TOXICITY: LD50 (orl-rat): 5840 mg/kg
PEL: 980 mg/m3
STEL: NE

TLV: 980 mg/m3

INGREDIENT: Phenolphthalein

TOXICITY: LD50 (orl-rat): >1 gm/kg
PEL: NE
STEL: NE

TLV: NE
5. HEALTH HAZARD DATA - continued

ROUTE(S) OF ENTRY: Inhalation X  Ingestion X  Skin X

TARGET ORGAN(S): Eyes, skin, respiratory tract, kidneys, liver, adrenal gland, reproductive organs.

CARCINOGENICITY: NTP Yes  IARC Yes  OSHA Yes

HEALTH HAZARDS AND SYMPTOMS OF EXPOSURE:

EYES: Irritant.

SKIN: Irritant.

INGESTION: Irritant. May cause severe gastrointestinal disturbance.

INHALATION: Irritant. May cause narcosis.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Eye, skin, and respiratory conditions

6. PRECAUTIONARY MEASURES

PROTECTIVE EQUIPMENT: General purpose gloves, safety glasses, lab coat

HANDLING: Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.

STORAGE: Cool, dry, well-ventilated area. Avoid direct sunlight.

7. EMERGENCY AND FIRST AID PROCEDURES

EYE AND SKIN CONTACT: Immediately flush eyes with water for 20 minutes or until chemical is removed. Call physician. Wash skin thoroughly with soap and water.

INGESTION: Give large amounts of water. Call physician. Induce vomiting under direction of physician. DO NOT induce vomiting or give anything by mouth to a person who is unconscious, rapidly losing consciousness, or convulsing.

INHALATION: Remove to fresh air. Call physician.

8. SPILL AND DISPOSAL PROCEDURES

SPILL OR RELEASE: Absorb with vermiculite or other inert material. Containerize for later disposal.

DISPOSAL: Incineration or other method to comply with all local, state, and federal regulations.

NA = Not applicable

ND = Not determined

NE = Not established

This Material Safety Data Sheet has been prepared in accordance with 29 CFR Part 1910.1200 and contains information believed to be accurate and complete at the date of preparation. However, no warranty is expressed or implied. Advice given under "Spill and Disposal Procedures" assumes compliance with federal, state, and local regulations regarding the disposal of hazardous waste.

DATE REVISED: July 2005