1 Identification of the substance/mixture and of the company/undertaking

- **Product Identifier**
- **Product Name**: BD CytoRich™ Blue Preservative
- **Catalog Number**: 490509

Details of the supplier of the safety data sheet
- **Manufacturer/Supplier**: BD Diagnostics - TriPath
  780 Plantation Drive
  Burlington, NC 27215
  Telephone: (336) 290 - 8300 or 866 - TriPath (option #1)

2 Composition/information on ingredients

- **Chemical characterization**: Mixture
- **Description**: Mixture consisting of the following components.

<table>
<thead>
<tr>
<th>Dangerous Components</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
<td>44.0%</td>
</tr>
<tr>
<td>67-56-1 methanol</td>
<td>5.0%</td>
</tr>
<tr>
<td>25322-68-3 Polyethylene Glycol</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
  - T; Toxic
    R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
  - Xn; Harmful
    R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
  - F; Highly flammable
    R11: Highly flammable.

- **Classification system**:
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**
  - **Labelling according to EU guidelines**:
The product has been classified and marked in accordance with regulations on hazardous materials.
  - **Code letter and hazard designation of product**:
    Xn Harmful
    F Highly flammable

- **Hazard-determining components of labelling**:
  - ethanol
  - methanol

- **Risk phrases**:
  - 11 Highly flammable.
4 First aid measures

· **General information**
  Immediately remove contaminated clothing.
  Symptoms of poisoning may even occur after several hours; therefore provide medical observation for at least 48 hours after the accident.

· **After inhalation**
  Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek medical advice.
  In case of unconsciousness place patient on side position for transportation.

· **After skin contact**
  Immediately wash with water and soap and rinse thoroughly.

· **After eye contact**
  Rinse opened eye for 15 minutes under running water. Then consult a doctor.

· **After swallowing**
  Do not induce vomiting; immediately call for medical help.
  Drink copious amounts of water and provide fresh air. Immediately call a doctor.

· **Information for doctor**
  Show this product label or this MSDS.

5 Firefighting measures

· **Suitable extinguishing agents**
  CO2, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents**
  Water with full jet.

· **Special hazards arising from the substance or mixture**
  During heating or in case of fire toxic gases may be produced.

· **Protective equipment:**
  Wear self-contained respiratory protective device.
6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective clothing.
  Use respiratory protective device.
- Environmental precautions: Wipe up with damp sponge or mop.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.

- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling
  - Precautions for safe handling
    Ensure good ventilation/exhaustion at the workplace.
    Prevent formation of aerosols.
  - Information about protection against explosions and fires:
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
- Storage
  - Requirements to be met by storerooms and receptacles: 15 - 30 °C
  - Information about storage in one common storage facility: Store away from oxidizing agents.
  - Further information about storage conditions: Store in cool, dry conditions in well sealed containers.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see Section 7.
- Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>PEL</th>
<th>REL</th>
<th>TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
<td>1900 mg/m³, 1000 ppm</td>
<td>1900 mg/m³, 1000 ppm</td>
<td>1880 mg/m³, 1000 ppm</td>
</tr>
<tr>
<td>67-56-1 methanol</td>
<td>260 mg/m³, 200 ppm</td>
<td>Short-term value: 325 mg/m³, 250 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Long-term value: 260 mg/m³, 200 ppm</td>
<td>Skin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short-term value: 328 mg/m³, 250 ppm</td>
<td>Long-term value: 262 mg/m³, 200 ppm</td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.
Product Name: BD CytoRich™ Blue Preservative

- **Personal Protective Equipment**
- **General protective and hygienic measures**
  - Keep away from foodstuffs, beverages and feed.
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes and skin.
- **Breathing equipment:**
  - In case of brief exposure, use a chemical fume hood or a NIOSH/MSHA-approved respirator.
- **Protection of hands:**
  - Chemical resistant gloves (i.e. nitrile, or equivalent).
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing (lab coat).

### 9 Physical and chemical properties

- **General Information**
  - **Appearance:**
    - Form: Liquid
    - Color: Clear Blue
  - **Odor:** Alcohol-like
  - **pH-value:** Not applicable

- **Change in condition**
  - Melting point/Melting range: Not determined
  - Boiling point/Boiling range: 82°C (180 °F)
- **Flash point:** 15°C (59 °F)
- **Ignition temperature:** 425.0°C (797 °F)
- **Auto igniting:** Product is not self igniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- **Explosion limits:**
  - Lower: 3.5 Vol %
  - Upper: 15.0 Vol %
- **Density:** 0.93 g/cm³ (7.761 lbs/gal)
- **Solubility in / Miscibility with**
  - Water: Soluble
- **Solvent content:**
  - Organic solvents: 49.0 %
  - Water: 49.0 %

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
11 Toxicological information

- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    - 64-17-5 ethanol
      - Oral LD50: 3450 mg/kg (MOU)
      - Oral LD50: 7060 mg/kg (rat)
    - 67-56-1 methanol
      - Oral LD50: 5628 mg/kg (rat)
  - Primary irritant effect:
    - on the skin: No irritating effect.
    - on the eye: No irritating effect.
  - Sensitization: No sensitizing effects known.
  - Subacute to chronic toxicity:
    - Target organs: thyroid, kidney, ureter or bladder tumors.
    - Target organ: liver
    - Target organs: eyes, and epidermilogical effects
  - Additional toxicological information:
    - The product shows the following dangers according to internally approved calculation methods for preparations: Harmful

12 Ecological information

- Aquatic toxicity: This material is not expected to be toxic to aquatic life.
- Ecotoxicological effects:
- Other information:
  - The ecological effects have not been thoroughly investigated, but currently none have been identified.
  - Additional ecological information:
    - General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water.

13 Disposal considerations

- Waste treatment methods
  - Recommendation
    - Must not be disposed of with solid waste.
    - Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.
    - RCRA hazardous waste - RCRA # D001 (ignitable).
  - Uncleaned packagings:
    - Recommendation: Disposal must be made according to state and federal regulations.
    - Recommended cleansing agent: Water, if necessary with cleansing agents.
### 14 Transport information

**DOT regulations:**
- **Hazard class:** 3
- **Identification number:** UN1987
- **Packing group:** II
- **Proper shipping name:** ALCOHOLS, N.O.S. (ETHANOL , METHANOL)
- **Label:** 3

**Land transport ADR/RID (cross-border):**
- **ADR/RID class:** 3 (Fl) Flammable liquids
- **Danger code (Kemler):** 33
- **UN-Number:** 1987
- **Packaging group:** II
- **UN proper shipping name:** 1987 ALCOHOLS, N.O.S., special provision 640D (ETHANOL , METHANOL)

**Maritime transport IMDG:**
- **IMDG Class:** 3
- **UN Number:** 1987
- **Label:** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Proper shipping name:** ALCOHOLS, N.O.S. (ETHANOL , METHANOL)

**Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1987
- **Label:** 3
- **Packaging group:** II
- **Proper shipping name:** ALCOHOLS, N.O.S. (ETHANOL , METHANOL)
15 Regulatory information

- SARA Section 355 (extremely hazardous substances)
  None of the ingredients is listed.

- SARA Section 313 (specific toxic chemical listings)
  64-17-5 ethanol
  67-56-1 methanol

- TSCA (Toxic Substances Control Act)
  All ingredients are listed.

- California Proposition 65 - Chemicals known to cause cancer
  None of the ingredients is listed.

- California Proposition 65 - Chemicals known to cause reproductive toxicity for females:
  None of the ingredients is listed.

- California Proposition 65 - Chemicals known to cause reproductive toxicity for males:
  None of the ingredients is listed.

- California Proposition 65 - Chemicals known to cause developmental toxicity:
  64-17-5 ethanol

- Carcinogenic categories
  None of the ingredients is listed.

- NTP (National Toxicology Program)
  None of the ingredients is listed.

- TLV (Threshold Limit Value established by ACGIH)
  64-17-5 ethanol  A4

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

- Department issuing MSDS:
  Environmental, Health & Safety
  Created by Michael J. Spinazzola

USA