MATERIAL SAFETY DATA SHEET

Bial's Reagent Solution (for pentoses)

SECTION 1. Product and Company Identification

Product Name and Synonym: Bial's Reagent Solution (for pentoses)
Product Code: B2000
Material Uses: Science Stuff
Manufacturer: 1104 Newport Ave
          Austin, TX  78753
          (512) 837-6020
Entry Date : 5/28/2013
Print Date: 5/28/2013
24 Hour Emergency Assistance : Chemtrec 800-424-9300
                               Canutec  613-996-6666

SECTION 2 HAZARD IDENTIFICATION

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

SECTION 3 MIXTURE COMPONENTS

<table>
<thead>
<tr>
<th>SARA 313</th>
<th>Component</th>
<th>CAS Number</th>
<th>Percent Comp.</th>
<th>Dimension</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alcohol, Reagent Denatured Ethyl Alcohol</td>
<td>CAS# 10025-77-1</td>
<td>0.9%</td>
<td>W/V</td>
<td>OSHA TWA 1000 ppm (1900 mg/m³)</td>
</tr>
<tr>
<td></td>
<td>Ferric Chloride Hexahydrate</td>
<td>CAS# 7647-01-0</td>
<td>Trace</td>
<td>V/V</td>
<td>OSHA PEL (C) 5 ppm, (C) 7 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Hydrochloric Acid</td>
<td>CAS# 6153-39-5</td>
<td>0.55%</td>
<td>W/V</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4 FIRST AID MEASURES

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

FIRST AID: CALL A PHYSICIAN. SKIN: Remove contaminated clothing. Wash exposed area with soap and water.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person.
Bial's Reagent Solution (for pentoses)

SECTION 5  FIRE FIGHTING MEASURES

Fire Extinguisher Type: Water spray, Carbon dioxide, dry chemical, powder, foam.

Fire / Explosion Hazards: Above flashpoint, vapor-air mixtures are explosive within flammable limits. Vapors may flow along surfaces to distant ignition source and flash back.

Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

SECTION 6  ACCIDENTAL RELEASE MEASURES

Dispose of in a manner consistent with federal, state and local regulations.

SECTION 7  HANDLING AND STORAGE

Store in a cool dry well ventilated area. Keep away from heat and flame. Do not get in eyes, on skin, or on clothing.

SECTION 8  EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Organic cartridge or self-contained
Ventilation
Local Exhaust ✓
Mechanical □

Protective Gloves: NIOSH Approved Gloves
Eye Protection: Splash Goggles

Other Protective Equipment: Use safe laboratory handling procedures.

SECTION 9  PHYSICAL AND CHEMICAL PROPERTIES

Melting Point: -114° C
Boiling Point: 78° C
Vapor Pressure: 50 mm Hg @ 25° C
Vapor Density: 1.6
Solubility in Water: Soluble
Appearance /Odors: Clear yellow solution / ethyl alcohol odor
Flash Point: 13° C
Specific Gravity: .79

Percent Volatile by Volume: 100%
Evaporation Rate N/E
Evaporation Standard Not Applicable
Auto Ignition Temp 422° C
Lower Flamm. Limit in Air 3.3%
Upper Flamm. Limit in Air 19%

SECTION 10  STABILITY AND REACTIVITY INFORMATION

Stability: Stable
Conditions to Avoid: Avoid heat and ignition sources
Bial’s Reagent Solution (for pentoses)

Materials to Avoid: Oxidizers, silver salts, halogen halides, alkaline metals, metal hydrides

Hazardous Decomposition Products: Carbon oxides

Hazardous polymerization: Will Not Occur

Conditions to Avoid: None known

SECTION 11 Toxicological Information

SECTION 12 Ecological Information

SECTION 13 Disposal Considerations

SECTION 14 Transport Information

DOT Classification: Flammable Liquid, n.o.s. (Ethyl Alcohol), 3, UN1993, PG II

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

SECTION 15 Regulatory Information

SECTION 16 Additional Information

Conditions aggravated/Target organs: Persons with preexisting skin, eye, respiratory, or kidney/liver disorders may be more susceptible. Toxic due to denaturants. Acute: irritation to skin, eyes, lungs, mucous membranes, and GI tract. Nausea, headache, narcosis, dizziness, and vision difficulties. Chronic: liver/kidney damage, blindness, pancreatitis, and nerve disorders.

Flammability

Health

Reactivity

Revisions

NFPA

0.1

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