Material Safety Data Sheet

1. Product Identification
Product Name: Acid Phosphatase Kit (Mod. King’s method)
Catalog Number: ACP 010 / ACP 011

2. Composition / Information on Hazardous Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>% W/V</th>
<th>Exposure Limits in Air</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td>TLV</td>
<td>STEL</td>
<td>PEL</td>
</tr>
</tbody>
</table>

Reagent 1: Buffer Reagent

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>% W/V</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Azide</td>
<td>26628-22-8</td>
<td>0.1 %</td>
<td>0.29 mg/m³</td>
<td>N / A</td>
<td>N / A</td>
<td>NIOSH 0.3 mg/m³ (skin)</td>
</tr>
<tr>
<td>Citric acid</td>
<td>5949-29-1</td>
<td>2.1 %</td>
<td>N / A</td>
<td>N / A</td>
<td>N / A</td>
<td>N / A</td>
</tr>
</tbody>
</table>

Reagent 2: Substrate Reagent

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>% W/V</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Azide</td>
<td>26628-22-8</td>
<td>0.1 %</td>
<td>0.29 mg/m³</td>
<td>N / A</td>
<td>N / A</td>
<td>NIOSH 0.3 mg/m³ (skin)</td>
</tr>
</tbody>
</table>

Reagent 3: Colour Reagent

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>% W/V</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Hydroxide</td>
<td>1310-73-2</td>
<td>0.8 %</td>
<td>2 mg/m³</td>
<td>2 mg/m³</td>
<td>N / A</td>
<td>NIOSH ILDH 10mg/m³</td>
</tr>
</tbody>
</table>

Reagent 4: Tartrate Reagent

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>% W/V</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Azide</td>
<td>26628-22-8</td>
<td>0.1 %</td>
<td>0.29 mg/m³</td>
<td>N / A</td>
<td>N / A</td>
<td>NIOSH 0.3 mg/m³ (skin)</td>
</tr>
</tbody>
</table>

Reagent 5: N/A

3. Hazard Identification

Primary Routes of Entry:
Inhalations, ingestion, skin and / or eye contact.

Inhalation:
Inhalation of Vapours, mists, or sprays of these components may irritate the nose, throat, and lungs. Symptoms are generally alleviated upon breathing fresh air.

Ingestion:
May cause abdominal pain, nausea, or sweating.

Skin Contact:
May enter body through skin. Clothing that becomes wet or significantly contaminated should be removed and replaced.
Eye Contact:
May irritate eyes, cause redness, pain.

Chronic Exposure:
N/A

Medical Conditions Aggravated by Exposure:
N/A

Health Effects:
Sodium azide is used as a preservative in this product. Adverse health effects are not expected from the recommended use of this product.

4. First Aid Measures

Inhalation:
If breathing becomes difficult, remove victim to fresh air. Seek medical attention immediately.

Ingestion:
Get medical attention if there has been ingestion of this product.

Skin Contact:
Avoid skin contact. If skin contact occurs, remove contaminated clothing and wash exposed skin with water. Get medical attention immediately.

Eye Contact:
Immediately flush eye(s) with large volume of water for atleast 15 minutes, occasionally lifting the lower lids. Get medical attention immediately.

5. Fire Fighting Measures

Flash Point (Method used): N/A  Flammable Limits – LEL: N/A  UEL: N/A

Extinguishing Media:
Use fire-extinguishing media appropriate for site conditions.

Special Fire Procedures:
Structural firefighting gear and self-contained breathing apparatus will provide adequate protection if this product is in a fire area.

Unusual Fire and Explosion Hazards:
Sodium azide can react with copper, lead, brass, or solder in plumbing to form explosive compounds of lead azide and copper azide. Sodium azide can react with acids to form explosive hydrogen azide.

6. Accidental Release Measures

Steps to be taken in case material is Released or Spilled:
Initiate cleaning up the spill with plenty of water and absorb material to contain / pick up the spilled solution. Place all contaminated disposable into a suitable container, seal, label and hold for disposal.

7. Handling and Storage

See package insert for storage information.

8. Exposure Controls and Personal Protection

Ventilation Data:
Supplemental ventilation such as general exhaust ventilation should be adequate under normal use of this product.

Respiratory Protection:
Respiratory protection is not required under normal use of this product. If respiratory protection is needed, follow OSHA respirator regulations (29CFR1910.134) and, if necessary, wear a NIOSH approved respirator. Select respirator based on its suitability to provide worker protection for given working conditions, level of airborne concentration, and presence of sufficient oxygen.
Protective Gloves:
Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly.

Other Protective Equipment:
Wear appropriate eye protection to prevent eye contact. Wear appropriate body protection to prevent skin contact.

Other Engineering Controls:
Eye wash stations and deluge showers.

Work Practices:
Good laboratory technique should be used when handling this product. Observe appropriate chemical hygiene. Avoid contact with eyes or skin. Do not place in mouth.

Hygienic Practices:
Do not eat, drink, or smoke while working with product. Upon completion of work activities involving this product, wash hands thoroughly with soap and water.

9. Physical And Chemical Properties
For All Components Unless Otherwise Indicated

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative Vapour density (air = 1)</td>
<td>N/A</td>
</tr>
<tr>
<td>Specific Gravity (water = 1)</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Vapour Pressure, mm Hg @ 20oC</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation rate (nBuAc = 1)</td>
<td>N/A</td>
</tr>
<tr>
<td>Freezing / Melting Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>N/A</td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Odour and Appearance Information
Reagent 1:
Reagent 2:
Reagent 3:
Reagent 4:
Reagent 5: N/A

10. Stability and Reactivity

Incompatibility (Materials to Avoid):
Strong bases, strong acids, and water reactive materials.

Hazardous Decomposition Products:
Thermal decomposition may produce carbon monoxide and carbon dioxide.

Will Hazardous Polymerization Occur?
Hazardous polymerization will not occur.

Conditions to Avoid / Polymerization: N/A.

Is the Product Stable?
Yes, under normal handling and storage conditions.

Conditions to Avoid/stability
Stable Solution. Avoid acidification of solution, which may generate hydrogen cyanide gas.

11. Toxicological Information

Toxicity Data:
Sodium azide (undiluted): LD50 (rat and mouse, oral)=27mg/kg; LD50 (rabbit, skin)=20 mg/kg.
Reproductive effects: 
N/A.

Target organ Effects: 
Eyes (redness), Skin (redness), central nervous systems (nausea/vomiting), cardiovascular systems (fall in blood pressure, change in heart rate), digestive (nausea/vomiting, diarrhea).

Carcinogenicity: No

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CAS #</th>
<th>% W/V</th>
<th>NTP Carcinogen</th>
<th>IARC</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Ecological Information

Environmental Fate / Stability: 
N/A

Effect of Material on plants or animals: 
N/A

Effect of Chemical on Aquatic Life: 
N/A

13. Disposal Considerations

EPA Waste Number and Proper Waste Disposal Method: 
Please consult local, state and federal regulations for additional guidance on disposal.

14. Transportation Information

Is this Material Hazardous? Not regulated under transportation regulations.

<table>
<thead>
<tr>
<th>Proper Shipping Name :</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard Class Number :</td>
<td>N/A</td>
</tr>
<tr>
<td>Packing Group:</td>
<td>N/A</td>
</tr>
<tr>
<td>UN Number:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

15. Regulatory Information

NA.

16. Other Information

NA => NOT APPLICABLE or NO INFORMATION