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Material Safety Data Sheet

1. Product Identification

Product Name : **Calkine α – Amylase Kit (Direct Substrate Method)**
Catalog Number : AMY 110 / AMY 111

2. Composition / Information on Hazardous Ingredients

Chemical Name	CAS #	% W/V	Exposure Limits in Air				
			ACGIH		OSHA		OTHER
			TLV	STEL	PEL	STEL	

Reagent 1: Amylase Reagent

Sodium Azide	26628-22-8	0.1	N / A	0.29 mg/m ³	N / A	N / A	NIOSH 0.3 mg/m ³ C (skin)
Potassium Thiocyanate	333-20-0	8.9					

Reagent 2: N/A

Reagent 3: N/A

Reagent 4: N/A

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:

Though not a likely route of occupational exposure, ingestion of this product, especially in large quantities,
May cause gastric distress. Symptoms may include: nausea, vomiting, or diarrhea.

Skin Contact:

If the liquid or Vapours of this product come in contact with the skin, mild irritation may develop. Sodium Azide may enter body through skin.

Eye Contact:

If the liquid or Vapours of this product come in contact with the eyes, mild irritation may develop.

Chronic Exposure:

N/A

Medical Conditions Aggravated by Exposure:

N/A

Health Effects:

If there is ingestion of large quantities of this product it can be poisonous. Significant exposure may cause headaches, dizziness, weakness, nausea, or vomiting. Risk of fatal exposure by ingestion is significant due to low concentration (potassium cyanide) and small volume per ample.

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 for atleast 15 minutes. 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 compound 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:

PPE should be level D: lab gloves, chemical resistant apron, boots and splash goggles. Use an absorbent material to contain / pick up the spilled solution. Place all spill residue into a suitable container, seal, label and hold for disposal.

7. Handling and Storage

Refer to packet insert for additional information on handling and storage procedures.

8. Exposure Controls and Personal Protection

Ventilation Data:

A system of local and / or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

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

Relative Vapour density(air = 1) :	N/A	Evaporation rate(nBuAc = 1):	N/A
Specific Gravity (water = 1) :	N/A	Freezing / Melting Point :	N/A
Solubility in Water :	Soluble	Boiling Point :	N/A
Vapour Pressure, mm Hg @ 20°C:	N/A	pH :	N/A

Odour and Appearance Information

Reagent 1: Clear, Colourless liquid

Reagent 2: N/A

Reagent 3: N/A

Reagent 4: N/A

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:

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:

Benzethonium Chloride (undiluted): LD50 (rat, oral)=368mg/Kg; Irritation (rabbit, eye)=20µg, severe reaction.

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

CHEMICAL NAME	CAS #	% W/V	NTP Carcinogen		IARC	OSHA
			Known	Anticipated		
N/A.						

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.

Proper Shipping Name : N/A	Packing Group: N/A	UN Number: N/A
Hazard Class Number : N/A		

15. Regulatory Information

NA.

16. Other Information

NA => NOT APPLICABLE or NO INFORMATION