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24 Hour Emergency Numbers: (703) 590-9204
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Creation Date: 12/17/91 (1132-11)
Revision Date: 07/23/02

MATERIAL SAFETY DATA SHEET

I. CHEMICAL IDENTIFICATION

TRADE NAMES: CALCIUM Titrets® and Indicator Solution

CATALOG NOS.: K-1705 and K-1710

COMPONENT CATALOG NO.: A-1700

DESCRIPTION: Reagent ampoules and indicator solution for the titrimetric determination of calcium in water. Each ampoule contains approximately 1 mL of liquid reagent sealed under vacuum. The bottle of indicator solution contains approximately 10 mL of accessory solution.

In the Titret™:

NFPA RATINGS: HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0

In the Indicator Solution:

NFPA RATINGS: HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0

II. COMPOSITION/INFORMATION ON INGREDIENTS

In the Titret™:

COMPONENT: Sodium Hydroxide
 CAS NO.: 1310-73-2 PERCENT: < 1.0

COMPONENT: Ammonium Chloride
 CAS NO.: 12125-02-9 PERCENT: < 1.0

COMPONENT: Ethylene Glycolbis (Beta Aminoethylether)
 N,N-Tetraacetic Acid (EGTA)
 CAS NO.: 67-42-5 PERCENT: < 1.0

COMPONENT: Zinc Sulfate
 CAS NO.: 7446-20-0 PERCENT: < 1.0

COMPONENT: Sodium Borate, Decahydrate
 CAS NO.: 1303-96-4 PERCENT: 2.5

COMPONENT: Deionized Water
 CAS NO.: 7732-18-5 PERCENT: 94.0

In the Indicator Solution:

COMPONENT: Sodium Hydroxide
 CAS NO.: 1310-73-2 PERCENT: < 0.1

COMPONENT: Zincon
 CAS NO.: 62625-22-3 PERCENT: < 1.0

COMPONENT: Ethylene Glycol
 CAS NO.: 107-21-1 PERCENT: 99.0

III. HAZARDS IDENTIFICATION

Harmful if swallowed.

ACUTE TOXICITY: Irritation, nausea, vomiting, CNS and cardiopulmonary effects, kidney damage

CHRONIC TOXICITY: Irritation, sensitization dermatitis, kidney damage

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: No data available.

IV. FIRST AID MEASURES

EYE AND SKIN CONTACT: Immediately flush eyes and skin with water for 15 minutes.

INGESTION: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Seek medical attention.

INHALATION: Remove individual to fresh air.

V. FIRE FIGHTING MEASURES

FLASH POINT: 232°F (closed cup) AUTOIGNITION POINT: 752°F

FLAMMABILITY LIMITS: UPPER: 15.3% LOWER: 3.2%

EXTINGUISHING MEDIA: Water, carbon dioxide or dry chemicals

VI. ACCIDENTAL RELEASE MEASURES

Take up with absorbent material. Place in small containers for disposal.

VII. HANDLING AND STORAGE

If this product is used as directed, the user will not come in contact with or be exposed to any of its chemical components.

Wash thoroughly after handling. Avoid contact with eyes.

Fragile. Liquid in glass. Handle with care.

The indicator solution has a limited shelf life and should not be used after the date specified on the bottle.

Product should be stored in the dark and at room temperature.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA & ACGIH THRESHOLD LIMIT VALUE: 50 ppm Ethylene Glycol (vapor)

PROTECTIVE EQUIPMENT: Safety glasses.

IX. PHYSICAL AND CHEMICAL PROPERTIES

In the Titret™:

STATE: Liquid APPEARANCE: Colorless ODOR: None
 SOLUBILITY IN WATER: Complete pH: 10 SPECIFIC GRAVITY: 1.0
 BOILING POINT: 100°C MELTING POINT: 0°C
 VAPOR PRESSURE: N/A VAPOR DENSITY: N/A

In the Indicator Solution:

STATE: Liquid APPEARANCE: Deep Red ODOR: None
 SOLUBILITY IN WATER: Miscible
 BOILING POINT: 197°C MELTING POINT: -13°C
 VAPOR PRESSURE: 0.05 mm Hg @ 20°C (Ethylene Glycol)
 SPECIFIC GRAVITY: 1.1 VAPOR DENSITY: 2.14 (Ethylene Glycol)

X. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS: When heated to decomposition, nitrogen, ammonia, hydrochloric acid fumes and oxides of boron, carbon, nitrogen, sodium, sulfur and zinc may be emitted.
 Stable under normal conditions.

XI. TOXICOLOGICAL INFORMATION

CARCINOGENIC STATUS: None.
 No other data available at this time.

XII. ECOLOGICAL INFORMATION

Ethylene glycol biodegrades rapidly, may leach to ground water, and is not expected to bioconcentrate.

No other data available at this time.

XIII. DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with Federal, State, and Local Regulations.

XIV. TRANSPORT INFORMATION

Not regulated.

XV. REGULATORY INFORMATION

EUROPEAN INFORMATION:

EU Symbols: Xn - HARMFUL, Xi - IRRITANT

Risk Phrases: Harmful if swallowed. Irritating to eyes, respiratory system and skin.

Safety Phrases: Avoid contact with skin and eyes. In case of contact with skin, wash immediately with plenty of water. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

CANADA INFORMATION:

WHMIS Classification: D2A, D2B

All chemical components of this product are listed on Canada's DSL list.

U.S. INFORMATION:

This product contains ethylene glycol which is subject to SARA Section 313 reporting requirements.

All chemical components of this product are listed on the TSCA Inventory.

XVI. OTHER INFORMATION

THE ABOVE INFORMATION IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. ALL PRODUCTS ARE OFFERED IN ACCORDANCE WITH THE MANUFACTURER'S CURRENT PRODUCTION SPECIFICATIONS AND ARE INTENDED SOLELY FOR USE IN ANALYTICAL TESTING. THE MANUFACTURER SHALL IN NO EVENT BE LIABLE FOR ANY INJURY, LOSS OR DAMAGE RESULTING FROM THE HANDLING, USE OR MISUSE OF THESE PRODUCTS.

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