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After Hours Emergency Nos.: (703) 447-9550
(540) 272-3874
Creation Date: 12/17/91 (1132-14)
Revision Date: 12/30/09

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 Titret™ ampoule contains approximately 1 mL of liquid reagent sealed under vacuum. The bottle of indicator solution contains approximately 9 mL of accessory solution.

In the Titret™:

NFPA RATINGS: HEALTH: 2 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, Heptahydrate
 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: > 93.5

In the Indicator Solution:

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

COMPONENT: Zincon, Monosodium Salt
 CAS NO.: 62625-22-3 PERCENT: < 0.5

COMPONENT: Deionized Water
 CAS NO.: 7732-18-5 PERCENT: < 2.5

COMPONENT: Ethylene Glycol
 CAS NO.: 107-21-1 PERCENT: > 97.0

III. HAZARDS IDENTIFICATION

Harmful if swallowed.

ACUTE TOXICITY: Irritation, nausea, vomiting, cough, headache, CNS depression, kidney damage

CHRONIC TOXICITY: Irritation, kidney damage

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: eye and kidney disorders

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 advice.

INHALATION: Remove individual to fresh air.

V. FIRE FIGHTING MEASURES

FLASH POINT: 111°C (closed cup) AUTOIGNITION POINT: 400°C

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

Always wear eye protection when working with these ampoules.

WARNING: Do not break the tip of the ampoule unless it is completely immersed in your sample. Breaking the tip in the air may cause the glass ampoule to shatter.

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.

Exposure of this product to temperatures up to 120°F (49°C) or even below 32°F (0°C) will not create a safety hazard. For optimum analytical accuracy, the product should be stored in the dark and at room temperature and, if applicable, product components should not be used beyond expiration date.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

ACGIH TLV: 100 mg/m³ C ethylene glycol, 5 mg/m³ TWA sodium borate, 2 mg/m³ C sodium hydroxide; OSHA PEL: 2 mg/m³ TWA sodium hydroxide
 PROTECTIVE EQUIPMENT: Impact- and splash-resistant eyewear; Protective gloves compatible with the hazardous reagent constituents identified on this MSDS.

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 pH: 5.67
 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

INCOMPATIBILITIES: strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS: nitrogen and ammonia fumes, oxides of boron, carbon, nitrogen, sodium, sulfur and zinc
 Stable under normal conditions.

XI. TOXICOLOGICAL INFORMATION

CARCINOGENIC STATUS: Ethylene glycol: ACGIH - Group A4, not classifiable as a human carcinogen.

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. Zinc sulfate is harmful to aquatic organisms.

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

Risk Phrases: Harmful if swallowed.

Safety Phrases: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

CANADIAN INFORMATION:

WHMIS Classification: D2A, D2B

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

U.S. INFORMATION:

OSHA: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard (29 CFR 1910.1200).

SARA Section 313: This product contains ethylene glycol and an ammonium salt which are subject to the reporting requirements of Section 313 of SARA Title III.

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

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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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