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After Hours Emergency Nos.: (703) 447-9550
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Creation Date: 07/15/87 (1170-17)
Revision Date: 11/29/11

MATERIAL SAFETY DATA SHEET

I. CHEMICAL IDENTIFICATION

TRADE NAME: TOTAL ALKALINITY Titrets® & ACTIVATOR SOLUTION

KIT CATALOG NOS.: K-9810, K-9815 and K-9820

ACTIVATOR SOLUTION CATALOG NO.: A-9800

DESCRIPTION: Reagent ampoules and accessory solution for the titrimetric determination of total alkalinity in water. Each ampoule contains approximately 1.1 mL of liquid reagent sealed under vacuum. The bottle of activator solution contains approximately 9 mL of accessory solution.

In the Ampoules:

NFPA RATINGS: HEALTH: 2 FLAMMABILITY: 0 REACTIVITY: 0

In the Activator Solution:

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

II. HAZARDS IDENTIFICATION

Harmful if swallowed.

ACUTE TOXICITY: Irritation, nausea, diarrhea, nerve depression

CHRONIC TOXICITY: Irritation, liver and kidney lesions

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Eye, skin, liver and kidney disorders

III. COMPOSITION / INFORMATION ON INGREDIENTS

In the Ampoules:

COMPONENT: Hydrochloric Acid, Concentrated
 CAS NO.: 7647-01-0 PERCENT: < 1.0

COMPONENT: Deionized Water
 CAS NO.: 7732-18-5 PERCENT: > 99.0

In the Activator Solution:

COMPONENT: Bromocresol Green
 CAS NO.: 76-60-8 PERCENT: < 0.1

COMPONENT: Methyl Red, Sodium Salt
 CAS NO.: 845-10-3 PERCENT: < 0.1

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

COMPONENT: Diethylene Glycol
 CAS NO.: 111-46-6 PERCENT: 27.0 - 28.0

COMPONENT: Deionized Water
 CAS NO.: 7732-18-5 PERCENT: > 72

IV. FIRST AID MEASURES

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

INGESTION: 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: N/A AUTOIGNITION POINT: N/A
 FLAMMABILITY LIMITS: UPPER: N/A LOWER: N/A
 EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, water spray or foam

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: Breaking the ampoule tip in air when the valve assembly is not attached 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 product components should not be used beyond expiration date.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA PEL: 2 mg/m³ TWA Sodium hydroxide, 5ppm C Hydrogen chloride
 ACGIH TLV: 2 mg/m³ C Sodium hydroxide, 2 ppm C Hydrogen chloride
 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 Ampoules:

STATE: Liquid APPEARANCE: Colorless ODOR: None
 SOLUBILITY IN WATER: Complete pH: 2 SPECIFIC GRAVITY: 1.0
 BOILING POINT: 100°C MELTING POINT: 0°C
 VAPOR PRESSURE: N/A VAPOR DENSITY: N/A

In the Activator Solution:

STATE: Liquid APPEARANCE: Green ODOR: None
 SOLUBILITY IN WATER: Miscible pH: 10 SPECIFIC GRAVITY: 1.03
 BOILING POINT: 150°C MELTING POINT: -5°C
 VAPOR PRESSURE & VAPOR DENSITY: Not determined

X. STABILITY AND REACTIVITY

INCOMPATIBILITIES: strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS: hydrogen chloride, hydrogen bromide, ammonia, chlorine, oxides of carbon, sulfur and nitrogen
 Stable under normal conditions.

XI. TOXICOLOGICAL INFORMATION

CARCINOGENIC STATUS: Hydrochloric acid: IARC - Group 3, not classifiable as to its carcinogenicity to humans.
 No other data available at this time.

XII. ECOLOGICAL INFORMATION

Diethylene glycol has a low bioconcentration potential and is practically non-toxic 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: If swallowed, seek medical advice immediately and show container or label.

CANADIAN INFORMATION:

WHMIS Classification: D2A, E

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

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XV. REGULATORY INFORMATION (cont'd)

U.S. INFORMATION:

RCRA: Contains RCRA regulated substances. EPA Waste ID No.:

Ampoules: D002

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

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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