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## MATERIAL SAFETY DATA SHEET

### I. CHEMICAL IDENTIFICATION

TRADE NAME: CHLORIDE Titrets® & Valve Assemblies

KIT CATALOG NOS.: K-2010 and K-2030

COMPONENT CATALOG NO.: A-2010T

DESCRIPTION: Reagent ampoules and valve assemblies for the titrimetric determination of chloride in water. Each ampoule contains approximately 1 mL of liquid reagent sealed under vacuum. Each valve assembly contains approximately 0.05 mL of liquid reagent.

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

### II. COMPOSITION/INFORMATION ON INGREDIENTS

#### In the Titret™:

COMPONENT: Silver Nitrate  
CAS NO.: 7761-88-8 PERCENT: < 1.0

COMPONENT: Nitric Acid  
CAS NO.: 7697-37-2 PERCENT: < 1.0

COMPONENT: Deionized Water  
CAS NO.: 7732-18-5 PERCENT: >98.0

#### In the Valve Assembly:

COMPONENT: Potassium Chromate  
CAS NO.: 7789-00-6 PERCENT: 5.0

COMPONENT: Diethylene Glycol  
CAS NO.: 111-46-6 PERCENT: 47.5

COMPONENT: Deionized Water  
CAS NO.: 7732-18-5 PERCENT: 47.5

### III. HAZARDS IDENTIFICATION

Harmful if swallowed.

ACUTE TOXICITY: Irritation, nausea, vomiting, diarrhea, kidney damage, circulatory or respiratory effects

CHRONIC TOXICITY: Irritation, methemoglobinemia, cyanosis, liver and 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. If necessary, give artificial respiration by mechanical means, do not use mouth to mouth resuscitation, seek medical attention.

### V. FIRE FIGHTING MEASURES

FLASH POINT: 290°F (closed cup) 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

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 and skin.

Fragile. Liquid in glass. Handle with care.

The valve assemblies have a limited shelf life. Do not use the valve assemblies after date specified on the box.

Product should be stored in the dark and at room temperature; however, temperatures up to 120°F or even below freezing will not normally affect reagent performance.

### VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA PEL & ACGIH TLV: 5mg/m<sup>3</sup> nitric acid TWA, 0.01 mg/m<sup>3</sup> silver nitrate TWA

PROTECTIVE EQUIPMENT: Safety glasses, gloves

### IX. PHYSICAL AND CHEMICAL PROPERTIES

#### In the Titret™:

STATE: Liquid APPEARANCE: Colorless ODOR: None  
SOLUBILITY IN WATER: Complete pH: 2 SPECIFIC GRAVITY: 1.05  
BOILING POINT: 100°C MELTING POINT: 0°C  
VAPOR PRESSURE: N/A VAPOR DENSITY: N/A

#### In the Valve Assembly:

STATE: Liquid APPEARANCE: Yellow ODOR: None  
SOLUBILITY IN WATER: Miscible pH: 7.5 SPECIFIC GRAVITY: 1.1  
BOILING POINT: 290°C MELTING POINT: -5°C  
VAPOR PRESSURE: Low VAPOR DENSITY: 3.1

### X. STABILITY AND REACTIVITY

INCOMPATIBILITIES: Strong bases

HAZARDOUS DECOMPOSITION PRODUCTS: When heated to decomposition, toxic oxides of nitrogen, potassium and silver may be emitted.

Stable under normal conditions.

### XI. TOXICOLOGICAL INFORMATION

CARCINOGENIC STATUS: IARC: Group 3 carcinogen (listed as Chromium)  
ACGIH: A1 - Confirmed human carcinogen (listed as Chromium (VI) compounds) NTP: Known carcinogen (listed as Chromium (VI) compounds)  
California: Carcinogen (listed as Chromium (VI) compounds)  
No other data available at this time.

### XII. ECOLOGICAL INFORMATION

Diethylene Glycol has a low potential to bioconcentrate and is practically non-toxic to aquatic organisms. Potassium chromate is harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment. 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, T - TOXIC

Risk Phrases: Harmful if swallowed. May cause heritable genetic damage. Harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

Safety Phrases: Avoid contact with skin and eyes. Wear protective gloves. In case of accident or if you feel unwell, seek medical advice (show the label where possible). After contact with skin, wash immediately with plenty of water. This material and/or its container must be disposed of as hazardous waste.

#### CANADIAN INFORMATION:

WHMIS Classification: D2A, D2B

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

#### U.S. INFORMATION:

This product contains nitric acid, silver nitrate and chromic acid, dipotassium salt which are subject to SARA Section 313 reporting requirements.

CALIFORNIA PROPOSITION 65: "WARNING - This product contains a chemical known to the State of California as a reproductive toxicant."

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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