CHEMetrics, Inc. 4295 Catlett Rd., Calverton, VA 20138 (800) 356-3072 (540) 788-9026

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After Hours Emergency Nos.: (703) 447-9550 (540) 272-3874

Creation Date: 01/08/87 (1437-18)

Revision Date: 11/22/10

MATERIAL SAFETY DATA SHEET

I. CHEMICAL IDENTIFICATION

TRADE NAMES: HYDRAZINE CHEMets®, ULR CHEMets®, VACUettes®, and

Vacu-vials®

CATALOG NOS.: R-5005, R-5005A, R-5005B, R-5005C, R-5005D, R-5011, and

K-5003

DESCRIPTION: Reagent ampoules for the determination of hydrazine in water. Each CHEMet™ and VACUette™ contains approximately 0.5 mL of liquid reagent sealed under vacuum. Each ULR CHEMet™ contains approximately 1 mL of liquid reagent sealed under vacuum. Each Vacu-vial ™ contains approximately 2 mL of liquid reagent sealed under vacuum.

NFPA RATINGS: HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0

II. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT: p-Dimethylaminobenzaldehyde CAS NO.: 100-10-7 PERCENT:

COMPONENT: Deionized Water

7732-18-5 PERCENT: > 6.0 CAS NO.:

COMPONENT: Methanol

CAS NO.: 67-56-1 PERCENT: <14.0

COMPONENT: Hydrochloric Acid, Concentrated CAS NO.: 7647-01-0 PERCENT: <17.0

COMPONENT: Ethylene Glycol

PERCENT: <62.0 CAS NO .: 107-21-1

III. HAZARDS IDENTIFICATION

Toxic. Causes severe burns.

ACUTE TOXICITY: Irritation, eye and skin burns, respiratory distress, central nervous system depression.

CHRONIC TOXICITY: Dermatitis, tooth erosion, conjunctivitis, respiratory and nervous system effects, kidney damage.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Respiratory disorders, liver and kidney disorders.

IV. FIRST AID MEASURES

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

INGESTION: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Seek medical attention.

INHALATION: Remove individual to fresh air. If breathing is difficult, administer oxygen. If not breathing give artificial respiration by mechanical means, do not use mouth to mouth resuscitation. Seek medical advice.

V. FIRE FIGHTING MEASURES

FLASH POINT: 51°C, closed cup

AUTOIGNITION POINT: 398°C (Ethylene Glycol)

FLAMMABILITY LIMITS (Ethylene Glycol): UPPER: 15.3% LOWER: 3.2% EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, alcohol foam or water

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 at room temperature, and should not be used beyond expiration date.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

ACGIH TLV: 100 mg/m³ C Ethylene Glycol, 5 ppm C Hydrogen Chloride gas, 200 ppm TWA Methanol (skin)

OSHA PEL: 5 ppm C Hydrogen Chloride gas, 200 ppm TWA Methanol (skin) PROTECTIVE EQUIPMENT: Impact- and splash-resistant eyewear; Protective gloves compatible with the hazardous reagent constituents identified on this MSDS

IX. PHYSICAL AND CHEMICAL PROPERTIES

STATE: Liquid APPEARANCE: Pale yellow ODOR: None SOLUBILITY IN WATER: Miscible SPECIFIC GRAVITY: 1 BOILING POINT: 115°C MELTING POINT: -8°C pH: < 0.5VAPOR PRESSURE: N/A VAPOR DENSITY: N/A

X. STABILITY AND REACTIVITY

INCOMPATIBILITIES: oxidizers, acids, oleum HAZARDOUS DECOMPOSITION PRODUCTS: hydrogen chloride, chlorine, hydrogen gas, oxides of carbon Stable under normal conditions.

XI. TOXICOLOGICAL INFORMATION

CARCINOGENIC STATUS: Hydrochloric acid: IARC - Group 3, not classifiable as to its carcinogenicity to humans; 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. Hydrochloric Acid hydrolyzes when exposed to water, will neutralize soil carbonate-based components, and evaporates from soil. Methanol is dangerous to aquatic life in high concentrations and is expected to biodegrade rapidly in soil and water. 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

U.S. DOT, IATA, and IMDG: Dangerous Goods in Excepted Quantities Hazard Class: 3 UN No.: 2924 Packing Group: III

XV. REGULATORY INFORMATION

EUROPEAN INFORMATION:

EU Symbols: C- CORROSIVE, T - TOXIC, F - FLAMMABLE

Risk Phrases: Causes severe burns. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin, and if swallowed.

Safety Phrases: Avoid contact with skin and eyes. In case of contact with skin or eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If swallowed, seek medical advice immediately and show container or label.

CANADIAN INFORMATION:

WHMIS Classification: B2, D1B, D2A, D2B, E

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

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XV. REGULATORY INFORMATION (continued)

U.S. INFORMATION:

RCRA: Contains RCRA regulated substances. EPA Waste ID Nos.: D001, D002

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 methanol 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.

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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