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After Hours Emergency Nos.: (703) 447-9550
(540) 272-3874
Creation Date: 05/17/88 (1130-23)
Revision Date: 05/20/10

MATERIAL SAFETY DATA SHEET

I. CHEMICAL IDENTIFICATION

TRADE NAMES: NITRATE CHEMetrics® & Vacu-vials® and CADMIUM FOIL PACKS

CATALOG NOS.: R-6902, R-6904, R-6909, K-6903, K-6923, and K-6933

DESCRIPTION: Reagent ampoules and cadmium foil packs for the determination of nitrate in water. Each CHEMet™ ampoule contains approximately 0.5 mL of liquid reagent sealed under vacuum. Each K-6903 and K-6933 Vacu-vial™ ampoule contains approximately 2 mL of liquid reagent sealed under vacuum. Each K-6923 Vacu-vial™ ampoule contains approximately 4.5 mL of liquid reagent sealed under vacuum. Each cadmium foil pack contains approximately 0.3 g of powder.

In the Ampoule:

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

In the Foil Pack:

NFPA RATINGS: HEALTH: 3 FLAMMABILITY: 1 REACTIVITY: 0

II. COMPOSITION / INFORMATION ON INGREDIENTS

In the Ampoule:

COMPONENT: Cyclohexanediamine Tetraacetic Acid, Disodium Magnesium Salt
 CAS NO.: 63451-33-2 PERCENT: < 0.5

COMPONENT: 2,5-Dihydroxybenzoic Acid
 CAS NO.: 490-79-9 PERCENT: < 2.0

COMPONENT: 4,5-Dihydroxynaphthalene-2,7-disulfonic Acid
 CAS NO.: 5808-22-0 PERCENT: < 2.0

COMPONENT: Sulfanilic Acid Sodium Salt, Hydrate
 CAS NO.: 123333-70-0 PERCENT: < 4.0

COMPONENT: Isopropyl Alcohol
 CAS NO.: 67-63-0 PERCENT: 5.0

COMPONENT: Ethylene Glycol
 CAS NO.: 107-21-1 PERCENT: < 18.0

COMPONENT: Deionized Water
 CAS NO.: 7732-18-5 PERCENT: > 67.5

COMPONENT: Other components
 CAS NO.: N/A PERCENT: < 1.0

Any component of this mixture not specifically listed (e.g. "other components") is not considered to present a carcinogen hazard.

In the Foil Pack:

COMPONENT: CDTA Trisodium Salt
 CAS NO.: 36679-96-6 PERCENT: <10.0

COMPONENT: Cadmium Metal Powder
 CAS NO.: 7440-43-9 PERCENT: <10.0

COMPONENT: Magnesium Sulfate, Heptahydrate
 CAS NO.: 10034-99-8 PERCENT: <10.0

COMPONENT: Tartaric Acid
 CAS NO.: 87-69-4 PERCENT: <35.0

COMPONENT: Sodium Tartrate, Dihydrate
 CAS NO.: 6106-24-7 PERCENT: <25.0

COMPONENT: Sodium Sulfate, Anhydrous
 CAS NO.: 7757-82-6 PERCENT: <30.0

III. HAZARDS IDENTIFICATION

Danger! Toxic, may affect central nervous system, gastrointestinal and respiratory tracts, liver and spleen. Harmful or fatal if swallowed.

ACUTE TOXICITY: Irritation, shortness of breath, chest pain, vomiting, corneal injury, cardiac disturbances, CNS effects, kidney failure

CHRONIC TOXICITY: Irritation, skin sensitization, danger of cumulative effects, cancer, bone, liver or kidney damage, may cause reproductive or fetal effects, may cause allergic reaction.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Respiratory conditions, liver or kidney disorders

IV. FIRST AID MEASURES

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

INGESTION: Give milk or beaten egg whites at frequent intervals. Induce vomiting, if directed by medical personnel. If cadmium has been ingested, give plenty of water and induce vomiting. Never give anything by mouth to or induce vomiting in an unconscious person. Seek medical attention.

INHALATION: Remove to fresh air. If necessary, give artificial respiration by mechanical means, do not use mouth to mouth resuscitation, seek medical advice.

V. FIRE FIGHTING MEASURES

FLASH POINT: N/A AUTOIGNITION POINT: Not determined

FLAMMABILITY LIMITS: UPPER: N/A LOWER: N/A

SUSCEPTIBILITY TO SPONTANEOUS HEATING: None

EXTINGUISHING MEDIA: Carbon dioxide or dry chemical

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, skin and clothing.

Fragile. Liquid in glass. Handle with care.

Protect foil pack from moisture. Do not inhale dust.

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 if applicable, product components should not be used beyond expiration date.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA PEL: 400 ppm TWA Isopropyl Alcohol, 0.005 mg/m³ TWA Cadmium
 ACGIH TLV: 100 mg/m³ C Ethylene Glycol, 200 ppm TWA Isopropyl Alcohol, 0.01 mg/m³ TWA Cadmium

PROTECTIVE EQUIPMENT: Impact- and splash-resistant eyewear; Protective gloves compatible with the hazardous reagent constituents identified on this MSDS; Fume hood; Lab coat

OTHER CONTROL MEASURES: See OSHA Standard 29 CFR 1910.1027 for control measures related to cadmium exposure.

IX. PHYSICAL AND CHEMICAL PROPERTIES

In the Ampoule:

STATE: Liquid APPEARANCE: Colorless to brown tint ODOR: None

SOLUBILITY IN WATER: Miscible pH: 3.5

BOILING POINT: 125°C MELTING POINT: -2°C

VAPOR PRESSURE: N/A SPECIFIC GRAVITY: 1.02

VAPOR DENSITY: N/A

In the Foil Pack:

STATE: Solid APPEARANCE: Blue Metallic Powder ODOR: None

SOLUBILITY IN WATER: Soluble pH: 3.4

BOILING POINT: N/A MELTING POINT: Not determined

VAPOR PRESSURE: N/A SPECIFIC GRAVITY: Not determined

X. STABILITY AND REACTIVITY

INCOMPATIBILITIES: strong oxidants, strong acids and bases

HAZARDOUS DECOMPOSITION PRODUCTS: toxic gases, oxides of cadmium, nitrogen, carbon and sulfur

Stable under normal conditions.

XI. TOXICOLOGICAL INFORMATION

CARCINOGENIC STATUS: Isopropyl alcohol: IARC - Group 3, not classifiable as to its carcinogenicity to humans.

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

Cadmium: IARC - Group 1, carcinogenic to humans; ACGIH - Group A2, suspected human carcinogen; NTP - known to be a human carcinogen; California Proposition 65 - carcinogen.

TOXICOLOGICAL STATUS: Cadmium: California Proposition 65 - reproductive toxicant (developmental, male).

No other data available at this time.

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XII. ECOLOGICAL INFORMATION

Ethylene glycol biodegrades rapidly, may leach to ground water, and is not expected to bioconcentrate. Isopropyl alcohol is not expected to adsorb to sediment or bioconcentrate, dangerous to aquatic life in high concentration. Cadmium is toxic 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: Xi - IRRITANT, Xn - HARMFUL, T - TOXIC, N - DANGEROUS FOR THE ENVIRONMENT

Risk Phrases: Harmful by inhalation and if swallowed. Irritating to eyes. May cause sensitization by skin contact. May cause cancer by inhalation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility. Possible risk of harm to the unborn child. Vapors may cause drowsiness and dizziness.

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. Do not breath dust. This material and its container must be disposed of in a safe way (cadmium). 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).

CANADIAN INFORMATION:

WHMIS Classification: D2A, D2B, E

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

U.S. INFORMATION:

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

Foil Pack: D006

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 isopropyl alcohol, ethylene glycol, and cadmium which are subject to the reporting requirements of Section 313 of SARA Title III.

CALIFORNIA PROPOSITION 65: This product contains a chemical known to the State of California as a carcinogen and 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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