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After Hours Emergency Nos.: (703) 447-9550
(540) 272-3874
Creation Date: 08/16/88 (2076-13)
Revision Date: 12/30/09

MATERIAL SAFETY DATA SHEET

I. CHEMICAL IDENTIFICATION

TRADE NAMES: CHROMATE CHEMets® and VACUettes®

CATALOG NOS.: R-2810, R-2810A, R-2810B, R-2810C and R-2810D

DESCRIPTION: Reagent ampoules for the determination of chromate in water. Each CHEMet™ and VACUette™ contains approximately 0.5 mL of liquid reagent sealed under vacuum.

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

II. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT: s-Diphenylcarbazine
CAS NO.: 140-22-7 PERCENT: < 0.1

COMPONENT: Acetone
CAS NO.: 67-64-1 PERCENT: < 3.5

COMPONENT: Acetic Acid
CAS NO.: 64-19-7 PERCENT: < 10.5

COMPONENT: Diethylene Glycol
CAS NO.: 111-46-6 PERCENT: < 27.5

COMPONENT: Deionized Water
CAS NO.: 7732-18-5 PERCENT: > 58.5

III. HAZARDS IDENTIFICATION

Harmful if swallowed. Causes burns.

ACUTE TOXICITY: Irritation, nausea, diarrhea, CNS effects, cough

CHRONIC TOXICITY: Irritation, dermatitis, liver and kidney lesions

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

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. Induce vomiting if directed by medical personnel. Seek medical advice immediately.

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: 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, should not be used beyond expiration date.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA PEL: 10 ppm Glacial Acetic Acid TWA, 1000 ppm Acetone TWA
ACGIH TLV: 10 ppm Glacial Acetic Acid TWA, 500 ppm Acetone TWA
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: Colorless to brown tint
ODOR: Mild, vinegar-like SPECIFIC GRAVITY: 1.03
SOLUBILITY IN WATER: Miscible pH: 2.2
BOILING POINT: 150°C MELTING POINT: -5°C
VAPOR PRESSURE: N/A VAPOR DENSITY: N/A

X. STABILITY AND REACTIVITY

INCOMPATIBILITIES: Acids, strong oxidants
HAZARDOUS DECOMPOSITION PRODUCTS: oxides of carbon and nitrogen
Stable under normal conditions.

XI. TOXICOLOGICAL INFORMATION

CARCINOGENIC STATUS: Acetone: ACGIH - Group A4, not classifiable as a human carcinogen.
No other data available at this time.

XII. ECOLOGICAL INFORMATION

Acetic acid has high BOD which may cause oxygen depletion in aquatic systems and is expected to biodegrade rapidly. Acetone is expected to volatilize and leach in soil, is expected to biodegrade rapidly and is not expected to bioconcentrate. 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: C - CORROSIVE, Xn - HARMFUL
Risk Phrases: Causes burns. Harmful if swallowed.
Safety Phrases: Avoid contact with skin and eyes. Wear suitable protective clothing, gloves, and eye/face protection. In case of contact with skin or eyes, rinse immediately with plenty of water and seek medical advice. 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.

U.S. INFORMATION:
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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Creation Date: 08/16/88 (2078-11)
Revision Date: 12/30/09

MATERIAL SAFETY DATA SHEET

I. CHEMICAL IDENTIFICATION

TRADE NAME: CHROMATE ACIDIFIER SOLUTION

CATALOG NO.: A-2800

DESCRIPTION: An accessory solution used in conjunction with reagent ampoules in the determination of chromate in water. Each bottle contains approximately 9 mL of accessory solution.

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

II. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT: Sulfuric Acid
CAS NO.: 7664-93-9 PERCENT: < 40.0

COMPONENT: Deionized Water
CAS NO.: 7732-18-5 PERCENT: > 60.0

III. HAZARDS IDENTIFICATION

Danger! Corrosive. Causes severe burns. Harmful if swallowed.
ACUTE TOXICITY: Irritation, burns, eye injury
CHRONIC TOXICITY: Irritation, dermatitis, tooth erosion, cyanosis, bronchitis, conjunctivitis
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Eye, skin and respiratory 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 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: N/A
FLAMMABILITY LIMITS: UPPER: N/A LOWER: N/A
EXTINGUISHING MEDIA: Dry chemical or carbon dioxide

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.
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, should not be used beyond expiration date.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA PEL & ACGIH TLV: 1 mg/m³ Sulfuric Acid TWA
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: Colorless ODOR: None
SOLUBILITY IN WATER: Miscible pH: < 0.5
BOILING POINT: 140°C MELTING POINT: 1°C
VAPOR PRESSURE: Not determined SPECIFIC GRAVITY: 1.2
VAPOR DENSITY: Not determined

X. STABILITY AND REACTIVITY

INCOMPATIBILITIES: Reducing materials, bases, metals
HAZARDOUS DECOMPOSITION PRODUCTS: hydrogen gas, oxides of sulfur
Stable under normal conditions.

XI. TOXICOLOGICAL INFORMATION

CARCINOGENIC STATUS: None
No other data available at this time.

XII. ECOLOGICAL INFORMATION

Sulfuric acid 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

U.S. DOT, IATA, and IMDG: Dangerous Goods in Excepted Quantities
Hazard Class: 8 UN No.: 1760 Packing Group: II

XV. REGULATORY INFORMATION

EUROPEAN INFORMATION:
EU Symbols: C - CORROSIVE
Risk Phrases: Causes severe burns.
Safety Phrases: Wear suitable protective clothing, gloves, and eye/face protection. In case of contact with eyes or skin, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

CANADIAN INFORMATION:
WHMIS Classification: D1A, E
All chemical components of this product are listed on Canada's DSL.

U.S. INFORMATION:
RCRA: Contains RCRA regulated substances. EPA Waste ID No.: 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

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After Hours Emergency Nos.: (703) 447-9550
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Creation Date: 2008-12-08 (2984-7)
Revision Date: 2012-02-14

MATERIAL SAFETY DATA SHEET

I. CHEMICAL IDENTIFICATION

TRADE NAME: COLOR COMPARATOR

CATALOG NOS.:

C-1805, C-1805E, C-1810, C-2810, C-2810A, C-2810B, C-2810C,
 C-2810D, C-3810, C-3901, C-3902, C-4601, C-4601A, C-4601B,
 C-4601C, C-4601D, C-4605, C-4605A, C-4605B, C-4605C, C-4605D,
 C-4815, C-4815C, C-6502, C-6502D, C-7501, C-7501L, C-7511, C-7518,
 C-7540, C-7599, C-9011

DESCRIPTION: Color standard ampoules used to quantify test results for the determination of various analytes in water. Each CHEMet™ and VACUette™ comparator ampoule contains approximately 1.7 mL of liquid reagent. Each ULR CHEMet™ comparator ampoule contains approximately 6.7 mL of liquid reagent.

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 or kidney lesions

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

III. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT: Diethylene Glycol
 CAS NO.: 111-46-6 PERCENT: ≤ 25.0

COMPONENT: Deionized Water
 CAS NO.: 7732-18-5 PERCENT: > 74

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.

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.

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, these products should be stored in the dark and at room temperature and should not be used beyond expiration date.

VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA PEL & ACGIH TLV: None established

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: Various colors ODOR: None

SOLUBILITY IN WATER: Miscible pH RANGE: 2.5 - 11.5

BOILING POINT: ≥ 100°C MELTING POINT: ≤ 0°C

VAPOR PRESSURE: N/A SPECIFIC GRAVITY: 1.0

VAPOR DENSITY: N/A

X. STABILITY AND REACTIVITY

INCOMPATIBILITIES: acids, bases

HAZARDOUS DECOMPOSITION PRODUCTS: oxides of carbon

Stable under normal conditions.

XI. TOXICOLOGICAL INFORMATION

CARCINOGEN STATUS: None

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

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

U.S. INFORMATION:

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

XVI. OTHER INFORMATION

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