

CHEMetrics, Inc.
4295 Catlett Rd., Calverton, VA 20138
(800) 356-3072 (540) 788-9026
Fax (540) 788-4856 E-mail technical@chemetrics.com

After Hours Emergency Nos.: (703) 447-9550
(540) 272-3874
Creation Date: 05/16/05 (2925-3)
Revision Date: 10/09/09

MATERIAL SAFETY DATA SHEET

I. CHEMICAL IDENTIFICATION

TRADE NAMES: CHLORINE Vacu-vials®, Activator & Neutralizer Solutions

KIT CATALOG NO.: K-2503

COMPONENT CATALOG NOS.: A-2500 and A-2501

DESCRIPTION: Reagent ampoules and accessory solutions for the determination of chlorine in water. Each Vacu-vial™ ampoule contains approximately 2 mL of liquid reagent sealed under vacuum. The bottles of activator and neutralizer solutions each contain approximately 9 mL of accessory solution.

In the Vacu-vials®:

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

In the Activator Solution:

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

In the Neutralizer Solution:

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

II. COMPOSITION/INFORMATION ON INGREDIENTS

In the Vacu-vials®:

COMPONENT: Formaldehyde Solution, 37%
 CAS NO.: 50-00-0 PERCENT: 0.2

COMPONENT: Potassium Phosphate Monobasic
 CAS NO.: 7778-77-0 PERCENT: < 2.5

COMPONENT: Methanol
 CAS NO.: 67-56-1 PERCENT: < 3.5

COMPONENT: Deionized Water
 CAS NO.: 7732-18-5 PERCENT: > 93

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 Activator Solution:

COMPONENT: Potassium Iodide
 CAS NO.: 7681-11-0 PERCENT: <15.0

COMPONENT: Deionized Water
 CAS NO.: 7732-18-5 PERCENT: >85.0

In the Neutralizer Solution:

COMPONENT: Sodium Hydroxide
 CAS NO.: 1310-73-2 PERCENT: < 5.0

COMPONENT: Sodium Metaphosphate
 CAS NO.: 10124-56-8 PERCENT: <10.0

COMPONENT: Potassium Phosphate Monobasic
 CAS NO.: 7778-77-0 PERCENT: <20.0

COMPONENT: Deionized Water
 CAS NO.: 7732-18-5 PERCENT: >65.0

III. HAZARDS IDENTIFICATION

ACUTE TOXICITY: Irritation, cough, blindness, weakness, nausea, diarrhea, vomiting, convulsions.

CHRONIC TOXICITY: Irritation, dermatitis, iodism, CNS effects causing headaches or impaired vision, kidney effects

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: skin or respiratory disorders, impaired kidney function. Chronic ingestion during pregnancy can cause fetal harm or death.

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. If not breathing give artificial respiration (do not use mouth to mouth resuscitation), if breathing is difficult, administer oxygen and 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

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, product components should not be used beyond expiration date.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA PEL: 0.75 ppm Formaldehyde TWA, 200 ppm Methanol TWA,
 2mg/m³ Sodium Hydroxide TWA

ACGIH TLV: 0.3 ppm C Formaldehyde, 200ppm Methanol TWA,
 2 mg/m³ C Sodium Hydroxide

PROTECTIVE EQUIPMENT: Safety glasses

OTHER CONTROL MEASURES: See OSHA Standard 29 CFR 1910.1048 for control measures related to formaldehyde exposure.

IX. PHYSICAL AND CHEMICAL PROPERTIES

In the Vacu-vials®:

STATE: Liquid APPEARANCE: Colorless ODOR: None

SOLUBILITY IN WATER: Complete pH: 4

BOILING POINT: 95°C MELTING POINT: 0°C

VAPOR PRESSURE: N/A SPECIFIC GRAVITY: 1

VAPOR DENSITY: N/A

In the Activator Solution:

STATE: Liquid APPEARANCE: Colorless ODOR: None

SOLUBILITY IN WATER: Miscible pH: 11

BOILING POINT: 100°C MELTING POINT: < 0°C

VAPOR PRESSURE: Not determined SPECIFIC GRAVITY: > 1

VAPOR DENSITY: Not determined

In the Neutralizer Solution:

STATE: Liquid APPEARANCE: Colorless ODOR: None

SOLUBILITY IN WATER: Miscible pH: 7.7

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

VAPOR PRESSURE: Not determined SPECIFIC GRAVITY: 1

VAPOR DENSITY: Not determined

X. STABILITY AND REACTIVITY

INCOMPATIBILITIES: strong acids, strong bases, strong reducing agents

HAZARDOUS DECOMPOSITION PRODUCTS: toxic fumes, oxides of

carbon, phosphorous, sodium, potassium, and iodine

Stable under normal conditions.

CHEMetrics, Inc.
4295 Catlett Rd., Calverton, VA 20138
(800) 356-3072 (540) 788-9026
Fax (540) 788-4856 E-mail technical@chemetrics.com

After Hours Emergency Nos.: (703) 447-9550
(540) 272-3874
Creation Date: 05/16/05 (2925-3)
Revision Date: 10/09/09

XI. TOXICOLOGICAL INFORMATION

CARCINOGENIC STATUS: Formaldehyde: IARC - Group 1, carcinogenic to humans; formaldehyde gas: ACGIH - Group A2, suspected human carcinogen; NTP - reasonably anticipated to be a human carcinogen; California Proposition 65 - carcinogen
No other data available at this time.

XII. ECOLOGICAL INFORMATION

Methanol in high concentrations is dangerous to aquatic life and is expected to biodegrade rapidly.
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, Xi - IRRITANT

Risk Phrases: Harmful by inhalation, in contact with skin and if swallowed.
Harmful: Possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

Safety Phrases: 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: D1A, D2A, D1B, D2B

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).

SARA Section 313: This product contains methanol and formaldehyde solution 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.

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.

Vacu-vials® is a registered trademark of CHEMetrics, Inc.