**CHEMetrics, Inc.**
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**After Hours Emergency Nos.:** **(703) 447-9550**
**(540) 272-3874**
**Creation Date:** **11/22/88 (1105-21)**
**Revision Date:** **11/29/11**

# MATERIAL SAFETY DATA SHEET

## I. CHEMICAL IDENTIFICATION

TRADE NAMES: SULFIDE CHEMets® Refill, VACUettes® Refills, and Vacu-vials® Ampoules

CATALOG NOS.: R-9510, R-9510A, R-9510B, R-9510C, R-9510D, R-9510V, K-9503 (ampoules), and K-9523 (ampoules)

DESCRIPTION: Reagent ampoules for the determination of sulfide in water. (Note: Complete kits contain reagent ampoules and Activator Solution, Catalog No. A-9500. See A-9500 MSDS also.)
Each CHEMet™ and VACUette™ ampoule contains approximately 0.5 mL of liquid reagent sealed under vacuum. Each K-9503 Vacu-vial™ ampoule contains approximately 2 mL of liquid reagent sealed under vacuum. Each K-9523 Vacu-vial™ ampoule contains approximately 4.5 mL of liquid reagent sealed under vacuum.

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

## II. HAZARDS IDENTIFICATION

Corrosive. Causes burns. Irritating to respiratory system.
ACUTE TOXICITY: Irritation, burns to eyes, skin, digestive and respiratory tract, respiratory distress, edema, vomiting, kidney and liver damage
CHRONIC TOXICITY: bronchitis, conjunctivitis, tooth erosion, blindness
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Eye, skin, and respiratory disorders

## III. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT: N,N,-Dimethyl-p-phenylenediamine oxalate
CAS NO.: 62778-12-5 PERCENT: < 0.1

COMPONENT: Isopropyl Alcohol
CAS NO.: 67-63-0 PERCENT: < 1.5

COMPONENT: Hydrochloric Acid, Concentrated
CAS NO.: 7647-01-0 PERCENT: 26.0 - 28.0

COMPONENT: Deionized Water
CAS NO.: 7732-18-5 PERCENT: > 70

## 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 immediately.
INHALATION: Remove individual 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, carbon dioxide or alcohol foam

## VI. ACCIDENTAL RELEASE MEASURES

Take up with absorbent material. Place in small containers for disposal. Ventilate area and wash spill site after material pick up is complete.

## 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 should not be used beyond expiration date.

## VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA PEL: 5 ppm C Hydrochloric Acid, 400 ppm TWA Isopropyl Alcohol
ACGIH TLV: 5 ppm C Hydrochloric Acid, 200 ppm TWA Isopropyl Alcohol
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: Pungent
SOLUBILITY IN WATER: Miscible pH: < 1
BOILING POINT: 150°C MELTING POINT: N/A
VAPOR PRESSURE: N/A SPECIFIC GRAVITY: 1.1
VAPOR DENSITY: N/A

## X. STABILITY AND REACTIVITY

INCOMPATIBILITIES: reducing agents, strong oxidants, strong bases
HAZARDOUS DECOMPOSITION PRODUCTS: hydrogen chloride, chlorine gas, nitrogen gas, oxides of carbon
Stable under normal conditions.

## XI. TOXICOLOGICAL INFORMATION

CARCINOGEN STATUS: Hydrochloric acid, isopropyl alcohol: IARC - Group 3, not classifiable as to its carcinogenicity to humans
No other data available at this time.

## XII. ECOLOGICAL INFORMATION

Hydrochloric Acid hydrolyzes when exposed to water, will neutralize soil carbonate-based components, and evaporates from soil. Isopropyl alcohol is not expected to adsorb to sediment or bioconcentrate, dangerous to aquatic life in high concentration.
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

US 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, Xi - IRRITANT
Risk Phrases: Causes burns. Irritating to respiratory system.
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 by inhalation, remove individual to fresh air and keep at rest. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

CANADIAN INFORMATION:
WHMIS Classification: D1B, D2B, 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).
SARA: This product contains isopropyl alcohol which is 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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**Creation Date:** **09/23/86 (1088-19)**
**Revision Date:** **11/29/11**

# MATERIAL SAFETY DATA SHEET

## I. CHEMICAL IDENTIFICATION

TRADE NAME: SULFIDE ACTIVATOR SOLUTION

CATALOG NO.: A-9500 and A-9500V

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

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

## II. HAZARDS IDENTIFICATION

Corrosive. Causes burns. Risk of serious damage to eyes. Harmful if swallowed. Irritating to respiratory system.
ACUTE TOXICITY: Irritation, burns to eyes, skin, digestive and respiratory tract, respiratory distress, edema, vomiting
CHRONIC TOXICITY: bronchitis, conjunctivitis, tooth erosion, blindness, CNS damage, liver and spleen damage
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Eye, skin, and respiratory disorders

## III. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT: Ferric Chloride, Hexahydrate
CAS NO.: 10025-77-1 PERCENT: 20.0 - 25.0

COMPONENT: Hydrochloric Acid, Concentrated
CAS NO.: 7647-01-0 PERCENT: 75.0 - 80.0

## 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 immediately.
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, carbon dioxide or alcohol foam

## VI. ACCIDENTAL RELEASE MEASURES

Take up with absorbent material. Place in small containers for disposal. Ventilate area and wash spill site after material pick up is complete.

## 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 should not be used beyond expiration date.

## VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA PEL & ACGIH TLV: 5 ppm C Hydrochloric Acid
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: Brownish gold ODOR: Pungent
SOLUBILITY IN WATER: Miscible pH: < 1
BOILING POINT: 196°C MELTING POINT: N/A
VAPOR PRESSURE: N/A SPECIFIC GRAVITY: 1.2
VAPOR DENSITY: 1.3

## X. STABILITY AND REACTIVITY

INCOMPATIBILITIES: bases, metals
HAZARDOUS DECOMPOSITION PRODUCTS: hydrogen chloride, chlorine gas, hydrogen gas
Stable under normal conditions.

## XI. TOXICOLOGICAL INFORMATION

CARCINOGEN STATUS: Hydrochloric acid: IARC - Group 3, not classifiable as to its carcinogenicity to humans

## XII. ECOLOGICAL INFORMATION

Hydrochloric acid hydrolyzes when exposed to water, will neutralize soil carbonate-based components, and evaporates from soil.
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

US 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, Xn - HARMFUL, Xi - IRRITANT
Risk Phrases: Causes burns. Risk of serious damage to eyes. Harmful if swallowed. Irritating to respiratory system.
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 by inhalation, remove individual to fresh air and keep at rest. If swallowed, seek medical advice immediately and show container or label. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

CANADIAN INFORMATION:
WHMIS Classification: D1A, 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.: 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

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.