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## MATERIAL SAFETY DATA SHEET

### I. CHEMICAL IDENTIFICATION

TRADE NAME: PHOSPHATE Vacu-Vials® and CHEMets®

CATALOG NOS.: K-8503 and R-8515

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

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

### II. HAZARDS IDENTIFICATION

Caution! Causes severe burns.

ACUTE TOXICITY: Burns, irritation, abdominal pain, circulation disturbances, nausea, vomiting, rapid pulse and respiration.

CHRONIC TOXICITY: Irritation, dermatitis, tooth erosion, conjunctivitis, bronchitis, pneumonia, chronic irritation or inflammation, hypotension

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Eye, skin and respiratory disorders.

### III. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT: Ammonium Vanadate  
 CAS NO.: 7803-55-6 PERCENT: < 0.1

COMPONENT: Ammonium Molybdate, Tetrahydrate  
 CAS NO.: 12054-85-2 PERCENT: < 2.0

COMPONENT: Sulfuric Acid  
 CAS NO.: 7664-93-9 PERCENT: <17.0

COMPONENT: Deionized Water  
 CAS NO.: 7732-18-5 PERCENT: >80.9

### IV. FIRST AID MEASURES

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

INGESTION: Do not induce vomiting. Give large quantities of water. Give at least 1 ounce of milk of magnesia in an equal amount of water, or 3 egg whites. 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 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.

Use adequate ventilation.

Avoid contact with eyes. Wash thoroughly after handling.

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: 1 mg/m<sup>3</sup> TWA Sulfuric Acid

ACGIH TLV: 0.2 mg/m<sup>3</sup> TWA Sulfuric 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: Pale yellow ODOR: None

SOLUBILITY IN WATER: Miscible pH: < 0.5

BOILING POINT: 120°C MELTING POINT: 0°C

VAPOR PRESSURE: N/A SPECIFIC GRAVITY: 1.08

VAPOR DENSITY: N/A

### X. STABILITY AND REACTIVITY

INCOMPATIBILITIES: caustics

HAZARDOUS DECOMPOSITION PRODUCTS: ammonia, oxides of nitrogen, molybdenum, and sulfur

Stable under normal conditions.

### XI. TOXICOLOGICAL INFORMATION

CARCINOGEN STATUS: soluble molybdenum compounds: ACGIH - Group A3, confirmed animal carcinogen with unknown relevance to humans  
 No other data available at this time.

### XII. ECOLOGICAL INFORMATION

Harmful to aquatic organisms.

No other data available at this time.

### XIII. DISPOSAL CONSIDERATIONS

Dispose of in accordance with all 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: 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: 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).

SARA: This product contains ammonium salts 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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