

**WTW GmbH**  
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**WTW Inc.**  
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**Creation Date: 06/13/05 (2939F-1)**  
**Revision Date:**

**FOR CHEMICAL EMERGENCY**  
**Spill Leak Fire Exposure or Accident**  
**Call CHEMTREC Day or Night**  
**DOMESTIC NORTH AMERICA: 800-424-9300**  
**INTERNATIONAL: 703-527-3887 (collect calls accepted)**

## MATERIAL SAFETY DATA SHEET

### I. CHEMICAL IDENTIFICATION

TRADE NAMES: PHOSPHATE Ampoules and Activator Solution

MODEL NO.: PO4-4 CV (LR)

DESCRIPTION: Reagent ampoules and accessory solution for the determination of ortho phosphate in water. Each ampoule contains approximately 2 mL of liquid reagent sealed under vacuum. The bottle of activator solution contains approximately 10 mL of accessory solution.

#### In the Ampoules:

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

#### In the Activator Solution:

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

### II. COMPOSITION/INFORMATION ON INGREDIENTS

#### In the Ampoules:

COMPONENT: Ammonium Molybdate, Tetrahydrate  
 CAS NO.: 12054-85-2 PERCENT: < 1.0

COMPONENT: Sulfuric Acid  
 CAS NO.: 7664-93-9 PERCENT: 5.0

COMPONENT: Deionized Water  
 CAS NO.: 7732-18-5 PERCENT: >94.0

#### In the Activator Solution:

COMPONENT: Stannous Chloride, Dihydrate  
 CAS NO.: 10025-69-1 PERCENT: <10.0

COMPONENT: Glycerin  
 CAS NO.: 56-81-5 PERCENT: >90.0

### III. HAZARDS IDENTIFICATION

Caution! May cause serious damage to eyes. Avoid contact with skin.  
 ACUTE TOXICITY: Burns, irritation, abdominal pain, circulation disturbances, cough, nausea, vomiting, diarrhea, rapid pulse and respiration  
 CHRONIC TOXICITY: Irritation, skin sensitization, dermatitis, tooth erosion, conjunctivitis, bronchitis, pneumonia, chronic irritation or inflammation, hypotension  
 MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Eye, skin, kidney, or respiratory 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. 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 attention.

### V. FIRE FIGHTING MEASURES

FLASH POINT: 177° C (glycerin) AUTOIGNITION POINT: 370 °C (glycerin)  
 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.

Product should be stored in the dark and at room temperature; however, temperatures up to 120 °F or even below freezing will not normally affect reagent performance.

### VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA PEL: 1 mg/m<sup>3</sup> Sulfuric Acid TWA, 2 mg/m<sup>3</sup> TWA as tin, 5 mg/m<sup>3</sup> TWA glycerin as respirable fraction

ACGIH TLV: 1 mg/m<sup>3</sup> Sulfuric Acid TWA, 2 mg/m<sup>3</sup> TWA as tin, 10 mg/m<sup>3</sup> glycerin mist

PROTECTIVE EQUIPMENT: Safety glasses, protective gloves

### IX. PHYSICAL AND CHEMICAL PROPERTIES

#### In the Ampoules:

STATE: Liquid APPEARANCE: Colorless ODOR: None

SOLUBILITY IN WATER: Complete pH: < 0.5

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

VAPOR PRESSURE: N/A SPECIFIC GRAVITY: 1.06

VAPOR DENSITY: N/A

#### In the Activator Solution:

STATE: Liquid APPEARANCE: Colorless ODOR: None

SOLUBILITY IN WATER: Miscible pH: 7

BOILING POINT: 182 °C @ 20 mm Hg MELTING POINT: 20 °C

VAPOR PRESSURE: 0.0025 mm Hg @ 50 °C (Glycerin)

SPECIFIC GRAVITY: 1.26 VAPOR DENSITY: 3.1 (Glycerin)

### X. STABILITY AND REACTIVITY

INCOMPATIBILITIES: Strong bases, strong oxidants

HAZARDOUS DECOMPOSITION PRODUCTS: When heated to decomposition, ammonia, hydrogen chloride, chlorine, acrolein, and oxides of carbon, nitrogen, molybdenum, tin, and sulfur may be emitted.

Stable under normal conditions.

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## XI. TOXICOLOGICAL INFORMATION

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

## XII. ECOLOGICAL INFORMATION

Glycerin is expected to readily biodegrade in soil and water and is not expected to be 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

U.S. DOT: 49 CFR, 173.4 Exceptions for Small Quantities  
IATA: Dangerous Goods in Excepted Quantities  
Hazard Class: 8 ID: UN 1760 GROUP: II

## XV. REGULATORY INFORMATION

### EUROPEAN INFORMATION:

EU Symbols: Xi - IRRITANT

Risk Phrases: May cause serious damage to eyes. May cause sensitization by skin contact.

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, D2B, E

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

### U.S. INFORMATION:

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.