

**WTW GmbH**  
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**WTW Inc.**  
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**Creation Date: 06/16/05 (2784F-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 NAME: OXYGEN DEMAND, CHEMICAL (COD)

MODEL NOS.: COD5 CK/25 (LR-MF), COD5 CK/150 (LR-MF), COD7 CK/25 (MR-MF), COD7 CK/150 (MR-MF), COD9 CK/25 (HR-MF), and COD9 CK/100 (HR-MF)

DESCRIPTION: Reagent vials for determination of the oxidizable organic matter content of wastewater. Each COD5 CK/25 (LR-MF), COD5 CK/150 (LR-MF), COD7 CK/25 (MR-MF), and COD7 CK/150 (MR-MF) vial contains 3.3 mL of liquid reagent. Each COD9 CK/25 (HR-MF) and COD9 CK/100 (HR-MF) vial contains 5.1 mL of liquid reagent.

NFPA RATINGS: HEALTH: 3 FLAMMABILITY: 0 REACTIVITY: 2

### II. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT: Sulfuric Acid  
 CAS NO.: 7664-93-9 PERCENT: >75.0

COMPONENT: Potassium Dichromate  
 CAS NO.: 7778-50-9 PERCENT: < 1.0

COMPONENT: Silver Sulfate  
 CAS NO.: 10294-26-5 PERCENT: < 1.0

COMPONENT: Deionized Water  
 CAS NO.: 7732-18-5 PERCENT: >20.0

### III. HAZARDS IDENTIFICATION

Danger! Toxic. Corrosive. Causes severe burns.

ACUTE TOXICITY: Causes severe burns. May cause abdominal pain, circulation disturbances, nausea, vomiting, rapid pulse, and respiration

ROUTES OF EXPOSURE: Ingestion, inhalation, skin absorption

TARGET ORGANS: Central nervous system, kidneys

CHRONIC TOXICITY: Teeth erosion, chronic irritation or inflammation

ROUTES OF EXPOSURE: Inhalation, skin absorption

TARGET ORGANS: Teeth, lungs, central nervous system, kidneys

OVEREXPOSURE: Any tissue contacted may become severely burned. If inhaled, the mist or vapor may cause teeth erosion, soreness of the mouth and/or difficulty in breathing.

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. Remove contaminated clothing. Call physician.

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. Call physician.

INHALATION: Remove to fresh air. Give artificial respiration if necessary. Call physician.

### V. FIRE FIGHTING MEASURES

FLASH POINT: N/A AUTOIGNITION POINT: N/A  
 FLAMMABILITY LIMITS: UPPER: N/A LOWER: N/A  
 SUSCEPTIBILITY TO SPONTANEOUS HEATING: None  
 SHOCK SENSITIVITY: None EXTINGUISHING MEDIA: N/A  
 FIRE/EXPLOSION HAZARDS: May emit toxic fumes in fire.  
 EXTINGUISHING MEDIA: Use media appropriate to surrounding fire conditions.

### VI. ACCIDENTAL RELEASE MEASURES

Take up with absorbent material. Place in small containers for disposal.

### VII. HANDLING AND STORAGE

Caution. Avoid contact with eyes, skin, and clothing.  
 Wash thoroughly after handling.  
 Use adequate ventilation. Do not breathe mist or vapor.  
 The reagent mixture is light sensitive. Store unused vials in a cool, dark place.

### VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA PEL: 0.1 mg/m<sup>3</sup> C Chromate, 1 mg/m<sup>3</sup> TWA Sulfuric Acid, 0.01 mg/m<sup>3</sup> TWA Silver

ACGIH TLV: 0.05 mg/m<sup>3</sup> TWA Chromium, 1 mg/m<sup>3</sup> TWA Sulfuric Acid, 0.01 mg/m<sup>3</sup> TWA Silver

PROTECTIVE EQUIPMENT: Fume hood, disposable gloves, lab grade goggles and lab coat

### IX. PHYSICAL AND CHEMICAL PROPERTIES

STATE: Liquid APPEARANCE: Turbid, amber

ODOR: Not determined

SOLUBILITY IN WATER: Miscible pH: <0.5

BOILING POINT: >100 °C MELTING POINT: N/A

VAPOR PRESSURE: Not determined

VAPOR DENSITY (air = 1): Not determined SPECIFIC GRAVITY: >1.0

### X. STABILITY AND REACTIVITY

INCOMPATIBILITY: May react violently with caustics.

HAZARDOUS DECOMPOSITION PRODUCTS: May emit toxic fumes of sulfur oxides in fire.

OXIDIZER: Mild

CONDITIONS TO AVOID: Exposure to light or organic contamination (will affect product stability). Contact with strong caustics.

Stable under normal conditions.

### XI. TOXICOLOGICAL INFORMATION

CARCINOGEN STATUS: Potassium dichromate is a recognized carcinogen. Oral rat LD50 = 428 mg/kg = Very Toxic

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**XII. ECOLOGICAL INFORMATION**

No data available

**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 1830 GROUP: II

**XV. REGULATORY INFORMATION****EUROPEAN INFORMATION:**

EU Symbols: T - TOXIC, C - CORROSIVE

Risk Phrases: May cause cancer. May cause heritable genetic damage.

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, D2A, E

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

**U.S. INFORMATION:**

This product contains potassium dichromate and silver sulfate, which are subject to SARA Section 313 reporting requirements.

CALIFORNIA PROPOSITION 65: "WARNING" - This product contains a chemical known to the State of California to cause cancer.

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

RCRA: Contains RCRA regulated substances.

**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.