

**WTW GmbH**  
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**WTW Inc.**  
**6E Gill St., Woburn, MA 01801 USA**  
**Phone: 781-569-0095**

**Creation Date: 06/16/05 (2783F-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.: COD4 CK/25 (LR), COD4 CK/150 (LR), COD6 CK/25 (MR),  
 COD6 CK/150 (MR), COD8 CK/25 (HR), & COD8 CK/100 (HR)

DESCRIPTION: Reagent vials for determination of the oxidizable organic matter content of wastewater. Each COD4 CK/25 (LR), COD4 CK/150 (LR), COD6 CK/25 (MR), and COD6 CK/150 (MR) vial contains 3.3 mL of liquid reagent. Each COD8 CK/25 (HR) and COD8 CK/100 (HR) 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: Mercuric Sulfate  
 CAS NO.: 7783-35-9 PERCENT: < 2.0

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

Mercury and its compounds are extremely toxic! Be extremely careful not to contact the spill or breathe any vapors. Absorb spilled liquid with non-reactive sorbent material. Dispose of all mercury contaminated material at an E.P.A. hazardous waste facility. Decontaminate area with commercially available mercury absorbing compounds. Product is regulated as RCRA hazardous waste. Product is regulated as a hazardous air pollutant. Product is regulated as a hazardous water pollutant.

### 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 Mercury, 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: 0.025 mg/m<sup>3</sup> TWA (skin) Mercury, 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**

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

No other data is 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 1830 GROUP: II

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

EU Symbols: T - TOXIC, C - CORROSIVE

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

Toxic by inhalation, in contact with skin, and if swallowed. Danger of cumulative effects. Causes severe burns. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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). This material and/or its container must be disposed of as hazardous waste.

**CANADIAN INFORMATION:**

WHMIS Classification: D1A, D2A, D2B, 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. EPA Waste ID Number: D002, D007, D009, D011.

**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.