

# Safety Data Sheet

Part Number 330053

## Section 1. Substance Identity and Company Contact Information

<b>Product Name</b>	Open Tubular Cadmium Reactor (OTCR)	<b>Product Part Number(s)</b>	A000897, A000327, 323891, A303-0500-12, and A303-0500-24
<b>Trade Name</b>	Open Tubular Cadmium Reactor (OTCR)	<b>Unit Size</b>	12" and 24"
<b>Company</b>	OI Analytical, P.O. Box 9010, College Station, TX 77842-9010, Phone: (979) 690-1711, Fax: (979) 690-0440		
<b>Emergency No. 1-800-424-9300 (Chemtrec).</b>	Use only in the event of chemical emergencies involving spills, leaks, fire, exposure, or accidents involving chemicals.		

## Section 2. Hazards Identification

**Pictogram(s)**



**Signal Word**

Danger

**Precautionary Statement(s)**

Fatal if inhaled. Causes eye and skin irritation. Harmful if swallowed. May cause cancer. Very toxic to aquatic life with long lasting effects.

**Target Organ(s)**

Blood, kidneys, liver, lungs, skeletal structures, and prostate.

**Potential Health Effects**

Eye:	Causes irritation.
Skin:	Causes irritation.
Ingestion:	Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting, and diarrhea. Ingestion may produce fluid loss, acute renal failure, and cardiopulmonary depression.
Inhalation:	May be fatal if inhaled. Inhalation of fumes may cause metal fume fever. May cause nausea, vomiting, abdominal pain, diarrhea, chest tightness, weakness, and delayed pulmonary edema. Causes proteinuria and excess of protein in the urine.

**Chronic Effects/ Carcinogenicity**

IARC:	Group 1 carcinogen
NTP:	Known carcinogen
OSHA:	Select carcinogen

**Teratology (Birth Defects) Information**

May cause reproductive and fetal effects.

**Reproductive Information**

May cause reproductive and fetal effects.

**NFPA Ratings**

Health:	4
Flammability:	0
Reactivity:	0
Special Notice Key:	Not data available

<b>HMIS Rating</b>	Health:	4
	Flammability:	0
	Reactivity:	0
	Protective Equipment:	B gloves and safety goggles

### Section 3. Chemical Composition and Data on Components

Ingredient	CAS No.	Percent	Hazard Data	
			ACGIH TLV	OSHA PEL
Cadmium	7440-43-9	100	0.01 mg/m <sup>3</sup> Total 0.002 mg/m <sup>3</sup> Respirable	0.005 mg/m <sup>3</sup>

### Section 4. First Aid Measures

<b>General Advice</b>	Move out of dangerous area. Consult a physician.
<b>If Inhaled</b>	Move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>In Case of Skin Contact</b>	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
<b>In Case of Eye Contact</b>	Flush eyes with water as a precaution.
<b>If Swallowed</b>	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
<b>Indication of Any Immediate Medical Attention and Special Treatment Needed</b>	No data available

### Section 5. Fire-fighting Measures

<b>General Information</b>	Emits toxic fumes under fire conditions. May spontaneously ignite when exposed to air at elevated levels.
<b>Suitable Extinguishing Media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Special Hazards Arising from the Substance or mixture</b>	Cadmium/cadmium oxides
<b>Advice for Firefighters</b>	Wear self-contained breathing apparatus for firefighting.
<b>Flash Point</b>	Not data available
<b>Autoignition Temperature</b>	Not data available
<b>Further Information</b>	No data available

### Section 6. Accidental Release Measures

<b>Personal Precautions, Protective Equipment, and Emergency Procedures</b>	Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
<b>Environmental Precautions</b>	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
<b>Methods and Materials for Containment and Cleaning</b>	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
<b>Reference to Other Sections</b>	For disposal, see Section 13.

## Section 7. Handling and Storage

<b>Precautions for Safe Handling</b>	Avoid contact with eyes and skin. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.
<b>Conditions for Safe Storage, Including any Incompatibilities</b>	Keep container tightly closed in a dry and well-ventilated place. Air sensitive.
<b>Specific End Use(s)</b>	Analytical chemistry

## Section 8. Exposure Controls and Personal Protection

<b>Components with Workplace Control Parameters</b>	Not data available
<b>Appropriate Engineering Controls</b>	Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product.
<b>Eye/Face Protection</b>	Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.
<b>Skin Protection</b>	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
<b>Body Protection</b>	Complete suit protecting against chemicals.
<b>Respiratory Protection</b>	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator. If the respirator is the sole means of protection, use a full-face supplied air respirator.
<b>Control of Environmental Exposure</b>	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## Section 9. Physical and Chemical Properties

<b>Appearance</b>	Form: Solid; Color: Grey
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No data available
<b>pH</b>	No data available
<b>Melting Point/Freezing Point</b>	320.9 °C
<b>Initial Boiling Point and Boiling Range</b>	765 °C
<b>Flash Point</b>	Not data available
<b>Evaporation Rate</b>	Not data available
<b>Flammability (solid, gas)</b>	Not data available
<b>Upper/Lower Flammability or Explosive Limits</b>	Not data available
<b>Vapor Pressure</b>	0.97 mm Hg
<b>Vapor Density</b>	Not data available
<b>Relative Density</b>	8.65 g/cm <sup>3</sup> at 25 °C (77 °F)
<b>Water Solubility</b>	0.0023 g/L at 20 °C (68 °F)
<b>Partition Coefficient : n-octanol/water</b>	Not data available
<b>Auto-ignition Temperature</b>	Not data available
<b>Decomposition Temperature</b>	Not data available
<b>Viscosity</b>	Not data available
<b>Explosive Properties</b>	Not data available
<b>Oxidizing Properties</b>	Not data available
<b>Other Safety Information</b>	No data available

## Section 10. Stability and Reactivity

<b>Reactivity</b>	No data available
<b>Chemical Stability</b>	Stable under ordinary conditions of storage and use.
<b>Possibility of Hazardous Reactions</b>	Not data available
<b>Conditions to Avoid</b>	Heat, flames, ignition sources, and incompatibilities.
<b>Incompatible Materials</b>	Oxidizing agents, acids

## Section 11. Toxicological Information

<b>Routes of Exposure</b>	<i>On the skin:</i> May cause irritation
	<i>On the eye:</i> May cause irritation
	<i>Inhalation:</i> Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
	<i>Ingestion:</i> May be harmful if swallowed.
<b>Respiratory or Skin Sensitization</b>	Not data available
<b>Signs and Symptoms of Overexposure</b>	Acute inhalation exposure to cadmium fumes may cause "metal fume fever" with flu-like symptoms of weakness, fever, headache, chills, nausea, vomiting, dizziness, sweating, muscular pain, cough, and difficulty breathing. Acute pulmonary edema may develop within 24 hours and reaches a maximum by three days. The first chronic effect of exposure to cadmium is generally kidney damage, manifested by excretion of excessive protein in the urine, followed by anemia, teeth discoloration, and loss of smell. Cadmium also is believed to cause pulmonary emphysema and bone disease.
<b>Toxicity Data</b>	<i>Oral Rat</i> LD50=2,330 mg/kg

## Section 12. Ecological Information

<b>General Notes</b>	Not data available
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## Section 13. Disposal Considerations

<b>Product</b>	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
<b>Contaminated Packaging</b>	Dispose of unused product.

## Section 14. Transport Information

<b>DOT Shipping Name</b>	Toxic solid, inorganic, n.o.s. (Cadmium)
<b>UN Proper Shipping Name</b>	Toxic solid, inorganic, n.o.s. (Cadmium)
<b>DOT Hazard Class</b>	6.1
<b>Packing Group</b>	II
<b>UN Number</b>	UN3288
<b>Hazardous Ingredients</b>	Not data available
<b>DOT Label</b>	Not data available
<b>DOT Placard</b>	Not data available
<b>IMDG Shipping Name</b>	Toxic solid, inorganic, n.o.s. (Cadmium)
<b>UN Number</b>	UN3288
<b>Class</b>	6.1
<b>Packing Group</b>	II

<b>IATA Shipping Name</b>	Toxic solid, inorganic, n.o.s. (Cadmium)
<b>Technical Shipping Name</b>	Toxic solid, inorganic, n.o.s. (Cadmium)
<b>IATA Hazard Class</b>	Not data available
<b>UN Number</b>	UN3288
<b>Hazardous Ingredients</b>	Not data available
<b>IATA Label</b>	Not data available
<b>IATA Placard</b>	Not data available

## Section 15. Regulatory Information

<b>OSHA Status</b>	No	
<b>TSCA Status</b>	Yes	
<b>CERCLA Reportable Quantity</b>	Not data available	
<b>SARA Title III</b>	Yes	
<b>RCRA Status</b>	Not data available	
<b>California Proposition 65</b>	This product is or contains chemical(s) known to the state of California to cause cancer.	
<b>Chemical Weapons Convention</b>	No	
<b>TSCA 12 (b)</b>	Yes	
<b>SARA 311/312</b>	Acute:	Not data available
	Chronic:	Not data available
	Fire:	Not data available
	Pressure:	Not data available
	Reactivity:	Not data available
<b>Australian Hazchem Code</b>	Not data available	
<b>Poison Schedule</b>	Not data available	
<b>WHMIS</b>	This SDS has been prepared according to the hazard criteria of the Controlled Product Regulations (CPR) and the SDS contains all of the information required by the CPR.	

## Section 16. Other Information

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