

MATERIAL SAFETY DATA SHEET

IDENTIFICATION & USE	TYPE OF PRODUCT Reagent Purification Column		CHEMICAL FAMILY transition metal							
	PRODUCT NUMBER Orion 170012		FORMULA Cd							
	MANUFACTURER'S NAME AND ADDRESS Thermo Fisher		PRODUCT USE Analyzer reagent							
	166 Cummings Center		EMERGENCY TELEPHONE NO. 1-800-424-9300							
	Beverly, MA 01915									
	CONTAINER SIZE AND TYPE		USE AS RECEIVED		YES					
HAZARDOUS INGREDIENTS	SHIPPING NAME		CLASS							
	PIN	WHMIS Classification Class D, Division 2		PACKING GROUP						
	CONCENTRATION*	HAZARDOUS	INGREDIENTS	CHEMICAL NAMES	LD ₅₀ mg/kg	LC ₅₀ **	CAS REGISTRY NO.			
	1 100		cadmium		ORL-RAT 225 mg/kg	NA	7440-43-9			
PHYSICAL DATA	FREEZING POINT		NA °C	MELTING POINT		NA °C	BOILING POINT	NA °C		
	VAPOUR PRESSURE		NA	VAPOUR DENSITY (AIR = 1)		NA	SPECIFIC GRAVITY (H ₂ O = 1)		8.6	
	COEFFICIENT OF WATER/OIL DISTRIBUTION		NA	EVAPORATION RATE		NA	pH AT 25 °C		NA	
	ODOUR THRESHOLD		NA	PHYSICAL STATE		GAS	LIQUID	PASTE	SOLID X	POWDER
	ODOUR AND APPEARANCE Grayish, black solid; no odour.									
FIRE & EXPLOSION DATA	FLASH POINT AND METHOD OF DETERMINATION				FLAMMABLE LIMITS		L.E.L.	U.E.L.		
	CONDITIONS OF FLAMMABILITY none									
	MEANS OF EXTINCTION Dry powder for metal fires.									
	HAZARDOUS COMBUSTION PRODUCTS									
					AUTO IGNITION TEMP.		°C			
	EXPLOSION DATA		SENSITIVITY TO MECHANICAL IMPACT none							
		SENSITIVITY TO STATIC DISCHARGE NA								
SPECIAL FIRE FIGHTING PROCEDURES Wear respirator.										
Cadmium dust auto ignition temperature = 250°C.										

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REACTIVITY	STABLE	YES	CONDITIONS TO AVOID heat and contact with oxidizers			PRODUCT NUMBER Orion 170012
	UNSTABLE					
	INCOMPATIBILITY—MATERIALS TO AVOID Strong oxidizers, sulfur, selenium, and tellurium.					
	HAZARDOUS DECOMPOSITION PRODUCTS					
CONDITIONS OF REACTIVITY						
HEALTH HAZARD DATA	HAZARDOUS ROUTES OF ENTRY	INHALATION YES	INGESTION YES	EYE CONTACT YES	SKIN CONTACT YES	SKIN ABSORPTION YES
	EFFECTS OF EXPOSURE, (ACUTE) Inhalation and ingestion: may cause shortness of breath, coughing, chills, weakness, death.					
	Skin: irritation of eyes, nose and throat.					
	EFFECTS OF EXPOSURE (CHRONIC) Ulceration of the nose and throat. <i>Inhalation</i>: loss of sense of smell.					
	Internal: may cause kidney damage and mild anemia.					
	EXPOSURE LIMITS Not to exceed 0.15 mg/m³ for a 15 minute period.					
	SENSITIZATION TO PRODUCT Heat, emphysema, kidney and prostate cancer.					
	CARCINOGENICITY Animal positive IARC ; ACGIH—none.					
	OTHER TOXICOLOGICAL EFFECTS No information available.					
	EMERGENCY AND FIRST AID PROCEDURES Seek medical attention for all serious forms of exposure.					
Eyes and Skin: immediately flush with a stream of running water for a minimum of 15 minutes, occasionally lifting eye lid. Wash skin with soap and water.						
Inhalation: Remove victim to fresh air. Give artificial respiration if necessary.						
Ingestion: Get immediate medical attention. If conscious give large amount of water or milk and induce vomiting.						
PREVENTIVE MEASURES	RESPIRATORY PROTECTION 150 mg/m³					
	VENTILATION	LOCAL EXHAUST to control to exposure limits			SPECIAL	
		MECHANICAL (GENERAL)			OTHER	
	HAND PROTECTION impervious gloves			EYE PROTECTION chemical goggles		
	PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL Wear protective clothing. Collect material in the most convenient and safe manner for reclamation or for disposal by a licensed waste handler.					
	WASTE DISPOSAL METHOD Dispose of in accordance with local, provincial, and federal laws.					
	HANDLING PROCEDURES AND EQUIPMENT					
	STORAGE REQUIREMENTS					
	SPECIAL SHIPPING INFORMATION					
	PREPARATION	PREPARED BY Peter Bakker		APPROVED BY Peter Bakker		
TITLE		TITLE		TELEPHONE		
		Chemistry Manager		(519) 941-8161		
		<i>Peter Bakker</i>		DATE November 5, 2009		
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