



Graver Technologies

# MATERIAL SAFETY DATA SHEET

Emergency Phone: 800-533-6623  
Information Phone: 800-533-6623  
Fax Number: 973-690-5808

HAZARD RATING		
Toxicity	1	4=EXTREME
Fire	1	3=HIGH
Reactivity	0	2=MODERATE
Special	N/A	1=SLIGHT 0=INSIGNIFICANT

## PRODUCT IDENTIFICATION

Product Name: **Radex CsFloc**  
Identity: Selective Inorganic Ion Exchanger  
MSDS Code: MS-RX-CSFLOC  
Effective Date: 10/12/05  
Supersedes: 5/25/99

## 1. COMPONENT INFORMATION

<u>No.</u>	<u>CAS No.</u>	<u>AMT.(%)</u>
1) Potassium Hexacyanocobalt (II) - Ferrate (II)	12549-23-4	70-95%
2) Proprietary Non-Hazardous Organic Polymer	NA	5-30%

## 2. PHYSICAL DATA

MELTING POINT:	Decomposition @ 250C
BOILING POINT:	Decomposition @ 250C
VAPOR PRESSURE (mm Hg):	Not applicable
VAPOR DENSITY (Air=1):	Not applicable
SOLUBILITY IN WATER:	Insoluble
SPECIFIC GRAVITY (water=1):	2.8
EVAPORATION RATE (Butyl acetate=1):	Not applicable
PERCENT VOLATILITY:	Not applicable
APPEARANCE:	Dark brown to black powder
ODOR	Odorless

### 3. EXPOSURE LIMIT INFORMATION

<u>COMPONENT NO.</u>	<u>OSHA</u>		<u>ACGIH</u>	
	<u>TWA</u>	<u>STEL</u>	<u>TLV</u>	<u>STEL</u>
1	None	None	None	None
2	None	None	None	None

### 4. FIRE AND EXPLOSION HAZARD DATA

**FLASH POINT:** Not Applicable

**METHOD USED:** Not Applicable

**AUTO-IGNITION TEMPERATURE:** Not Applicable

**LOWER EXPLOSIVE LIMIT:** Not Applicable

**UPPER EXPLOSIVE LIMIT:** Not Applicable

**FIRE FIGHTING EQUIPMENT:** Wear positive pressure self-contained breathing apparatus.

**EXTINGUISHING AGENTS:** Use the following extinguishing media when fighting fires involving this material: 1) chemical foam 2) dry chemical 3) water spray

### 5. REACTIVITY DATA

**STABILITY:** Stable

**INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID):** Hot, concentrated mineral acids

**HAZARDOUS DECOMPOSITION PRODUCTS:** Hydrogen cyanide may evolve if contacted by hot, concentrated mineral acids

**HAZARDOUS POLYMERIZATION:** None

## **6. ENVIRONMENTAL AND DISPOSAL INFORMATION**

**ACTION TO TAKE FOR SPILLS/LEAKS:** Sweep up and wash away with water.

**DISPOSAL METHOD:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. Bury resin in licensed landfill, or burn in approved incinerator according to local, state, and federal regulations. For resin contaminated with hazardous material, dispose of mixture as hazardous material according to local, state, and federal regulations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. GRAVER TECHNOLOGIES, INC. HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL.

**PRECAUTIONS IN HANDLING AND STORAGE:** Avoid contact while handling. Store in cool, dark area.

## **7. HEALTH HAZARD DATA**

**EYE:** May cause eye irritation. Flush with water for a minimum of 5 minutes. Consult a physician if irritation persists.

**SKIN CONTACT:** Prolonged or repeated exposure may cause skin irritation or dehydration. If irritation occurs, wash affected area with water and soap. Consult a physician if irritation persists.

**SKIN ABSORPTION:** Skin absorption is unlikely due to physical properties.

**INGESTION:** Dust potentially harmful if swallowed. If irritation persists, call a physician.

**INHALATION:** Move subject to fresh air immediately if inhaled. Consult a physician if irritation persists.

**SYSTEM & OTHER EFFECTS:** No specific data available, however, repeated exposures are not anticipated to cause any significant adverse effects.

## **8. PERSONAL PROTECTION MEASURES**

**EXPOSURE GUIDELINES:** None established.

**VENTILATION:** Good general ventilation should be sufficient.

## **8. PERSONAL PROTECTION MEASURES (continued)**

**RESPIRATORY PROTECTION:** A respiratory protection program meeting **OSHA 1910.134** and **ANSI Z88.2** requirements must be followed whenever workplace conditions warrant a respirator's use. At a minimum, a dust mask should be worn when handling this material.

**EYE PROTECTION:** Use safety glasses **ANSI Z87.1** or approved equivalent.

**SKIN & HAND PROTECTION:** Avoid skin contact. When using this substance, use skin protection (clean body-covering clothing) and latex or rubber gloves for the hands.

**OTHER PROTECTIVE EQUIPMENT:** Facilities storing or utilizing this material should be equipped with an eyewash facility.

**WORK / HYGENIC PRACTICES:** Wash hands after handling.

## **9. STORAGE AND HANDLING INFORMATION**

**STORAGE CONDITIONS:** The minimum recommended storage temperature for this material is 3°C/38°F. The maximum recommended storage temperature for this material is 60°C/140°F.

**HANDLING PROCEDURES:** The maximum recommended operating temperature for this material is 110°C/230°F. **NOTE:** This product is a powder and may produce slight eye irritation. However, it should be treated as a severe eye irritant. Worker exposure to powders can be controlled with local exhaust ventilation at the point of dust generation, or the use of suitable personal protective equipment (dust/mist air-purifying respirator and safety goggles).

## **10. REGULATORY INFORMATION**

**WORKPLACE CLASSIFICATIONS:** This product is considered non-hazardous under OSHA Hazard Communication Standard (29CFR 1910.1200).

This product is not a 'Controlled Product' under the Canadian Workplace Hazardous Materials Information System (WHMIS).

**TRANSPORTATION CLASSIFICATIONS:** US DOT Hazard Class - Non-regulated

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## **10. REGULATORY INFORMATION (continued)**

### **EMERGENCY PLANNING & COMMUNITY RIGHT-TO-KNOW (SARA TITLE 3):**

**Section 311/312 Categorizations (40CFR 370)** This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

**Section 313 Information (40CFR 372)** This product does not contain a chemical which is listed in Section 313 above de minimis concentrations.

**CERCLA Information (40CFR 302.4)** Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committee under the Superfund Amendments and Reauthorization Act (SARA Title III Section 304).

**RCRA Information** When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and is not listed in 40CFR 261.33. The toxicity characteristic (TC), however, has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).

**Chemical Control Law Status** All components of this product are listed or are excluded from listing on the U.S. Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

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#### **Abbreviations:**

**ACGIH** - American Conference of Governmental Industrial Hygienists

**OSHA** - Occupational Safety and Health Administration

**TLV** - Threshold limit Value

**TWA** - Time Weighted Average

**STEL** - Short-Term Exposure Limit

The above information contained herein relates to the specific material identified. Graver Technologies believes that such information is accurate and reliable as of the date of this material safety data sheet, but no representation, guarantee or warranty, express or implied, is made as to the accuracy, reliability, or completeness of the information. Graver Technologies urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application. Consult Graver Technologies for further information