Material Safety Data Sheet

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POTASSIUM DICHROMATE

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SECTION 1. MATERIAL IDENTIFICATION 19

MATERIAL NAME: **POTASSIUM DICHROMATE**

OTHER DESIGNATIONS: Potassium Bichromate; Chromic Acid, Dipotassium Salt; Bichromate of Potash; $K_2Cr_2O_7$; CAS #7778-50-9

MANUFACTURER/SUPPLIER: Available from several suppliers, including:
JT Baker Chemical Co., 222 Red School Lane, Phillipsburg, NJ 08865; Telephone: (201) 859-5411

HMIS
H: 3
F: 0
R: 1
PPE: *
* See Sect. 8

R 0
I 4
S 2
K 0

SECTION 2. INGREDIENTS AND HAZARDS

	%	HAZARD DATA
POTASSIUM DICHROMATE, $K_2Cr_2O_7$	>99	ACGIH TLV (1985-86) 8-hr TWA: 0.05 mg/m^3 as Cr (VI) --- OSHA PEL Ceiling 0.1 mg/m^3 --- Oral, Dog, LDLo: 2829 mg/kg --- Oral, Guinea Pig, LDLo: 163 mg/kg --- Oral, Child, LDLo: 26 mg/kg
NIOSH recommends a TWA of 0.025 mg/m^3 and a ceiling of 0.050 mg/m^3, as Cr (VI).		
Note: Purity level may vary with grade. Check supplier's specifications for exact composition information.		

SECTION 3. PHYSICAL DATA

Melting Point ... 748.4°F (398°C)
Specific Gravity @ 25°C ... 2.676
Solubility in Water, @ 0°C ... 4.9 g/100c
@ 100°C ... 102 g/100cc

pH of Aqueous Solution, 1% ... 4.0
10% ... 3.6

Boiling Point ... 932°F (500°C) (Decomposes)

Vapor Pressure @ 25°C ... Negligible

Appearance and odor: Bright orange-red crystals. No odor.

SECTION 4. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits In Air	LOWER	UPPER
Not Applicable	Not Applicable	Not Applicable		

Potassium Dichromate is an oxidizing agent and can promote and intensify combustion, particularly when heated. Flood fires with water (if water is a suitable extinguisher for burning material). Prevent runoff to sewers and waterways.

Fire fighters should wear self-contained breathing apparatus and full protective gear.

SECTION 5. REACTIVITY DATA

Potassium dichromate is stable at room temperature. It does not polymerize. It decomposes at 932°F (500°C) with the evolution of oxygen and formation of chromium oxide and potassium chromate.

This material is a strong oxidizing agent. Contact with reducing agents and flammable and combustible materials (paper, wood, organics, metals) can cause ignition, particularly when heated. It reacts explosively with hydrazine and hydroxylamine.

SECTION 6. HEALTH HAZARD INFORMATION TLV

Inhaling dichromate dust and mist can irritate the nose, throat, bronchial tubes, and lungs. Prolonged or repeated exposure may result in ulceration and perforation of the nasal septum. Kidney and liver damage have also been reported. Skin contact is associated with both contact dermatitis and allergic skin rashes. Ulceration of the skin ("Chrome ulcers") may also occur, especially if the skin is broken. Increased incidence of respiratory cancer have been reported in the chromate-producing industry. The IARC has classified "chromium and certain chromium compounds" as being carcinogenic to humans. The specific chromium compounds responsible for the carcinogenic effects are not identified. In its 1975 criteria document on chromium (VI), NIOSH identified potassium dichromate as a "non-carcinogenic chromium (VI)."

FIRST AID: EYE CONTACT: Immediately flush eyes with plenty of water, including under the eyelids, for at least 15 minutes. Seek medical attention immediately. SKIN CONTACT: Remove contaminated clothing. Immediately wash contaminated skin with soap and water. If irritation persists after washing, prevent further contact and seek medical attention.* INHALATION: Remove victim to fresh air. If necessary, aid breathing and get medical help. INGESTION: If victim is conscious, give large quantities of water to drink. Induce vomiting. Never give victim anything by mouth if he/she is unconscious or in convulsions. Get medical assistance immediately.*

* GET MEDICAL ATTENTION = In plant, paramedic, community.

SECTION 7. SPILL, LEAK, AND DISPOSAL PROCEDURES

Notify safety/environmental personnel of large spills. Carefully scoop up spilled powder into a metal drum with cover. Avoid generating dust. Mop up residue with water, recovering the resulting solution for treatment and disposal. Absorb small solution spills on inert absorbent and place in a suitable container for disposal. Those involved in cleanup work should use personal protective equipment to prevent contact with skin, eyes, and clothing, and inhalation of dust and mist. Reporting of spills may be required. Reportable spill quantity = 1000 lbs. (40 CFR 117).
DISPOSAL: Waste containing this material may require disposal as a hazardous waste in an approved chemical landfill. Contact supplier or a licensed chemical waste disposal contractor for treatment and disposal instructions. Follow Federal, state, and local regulations.
Applicable EPA Hazardous Waste Numbers: D001 (Ignitable, 40 CFR 261.21); D007 (EP Toxic, 40 CFR 261.24).

SECTION 8. SPECIAL PROTECTION INFORMATION

Provide general and local exhaust ventilation to meet the TLV and PEL requirements. NIOSH-approved full-facepiece respirators with high-efficiency dust/mist filters should be used at operations where the TLV may be exceeded. Self-contained breathing apparatus or supplied-air respirators should be worn under severe exposure conditions. Respirator usage must be in accordance with OSHA requirements (29 CFR 1910.134). Wear rubber gloves, boots, apron, and chemical goggles or face shield when handling this material and its solutions. Leather gloves and shoes should be avoided because they may become impregnated with bichromate. If clothing becomes contaminated, fresh clothing should be obtained promptly. Launder contaminated clothing before reuse.

Safety showers and eyewash stations should be provided in work areas where this material is handled.

Contact lenses pose a special hazard; soft lenses may absorb and all lenses concentrate irritants.

SECTION 9. SPECIAL PRECAUTIONS AND COMMENTS

Store in closed containers in a cool, dry location on noncombustible surface. Store away from flammable and combustible materials and easily oxidizable substances. Protect containers from physical damage. Maintain good housekeeping procedures. Clean up spills promptly. Use with adequate ventilation.

Follow good personal hygiene practices. Wash hands thoroughly after handling and before eating and smoking. Wash all areas of the body that may have come in contact with the material at the end of each work shift. Eating and smoking should not be permitted in areas where solids or liquids containing chromates are handled. Avoid inhalation of dust/mist and contact with skin and eyes. Do not ingest.

DOT Classification: ORM-A Label: None (49 CFR 172.101) DOT ID No.: NA1479

Data Source(s) Code: 2, 4, 5, 8, 9, 12, 19, 25, 27, 57, 58, 61, 82. CV

Approvals	
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Medical Review	