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CHROMIC POTASSIUM SULFATE, DODECAHYDRATE
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MATERIAL SAFETY DATA SHEET

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SUBSTANCE IDENTIFICATION

CAS-NUMBER 7788-99-0

SUBSTANCE: **CHROMIC POTASSIUM SULFATE, DODECAHYDRATE**

TRADE NAMES/SYNONYMS:

CHROMIC ALUM; POTASSIUM CHROMIUM ALUM;
CHROMIUM(III) POTASSIUM SULFATE, DODECADRATE;
SULFURIC ACID, CHROMIUM(3+) POTASSIUM SALT (2:1:1), DODECAHYDRATE; C-337;
ACC19330

CHEMICAL FAMILY:
INORGANIC SALT

MOLECULAR FORMULA: CR-K-O8-S2 12H2O

MOLECULAR WEIGHT: 499.0

CERCLA RATINGS (SCALE 0-3): HEALTH=3 FIRE=0 REACTIVITY=0 PERSISTENCE=3
NFPA RATINGS (SCALE 0-4): HEALTH=3 FIRE=0 REACTIVITY=0

COMPONENTS AND CONTAMINANTS

COMPONENT: CHROMIC POTASSIUM SULFATE
CAS# 7788-99-0

PERCENT: 100

OTHER CONTAMINANTS: NONE

EXPOSURE LIMITS:

0.5 MG(CR)/M3 OSHA TWA; 0.5 MG(CR)/M3 ACGIH TWA

PHYSICAL DATA

DESCRIPTION: LARGE VIOLET-RED TO BLACK OCTAHEDRAL, CUBIC CRYSTALS

BOILING POINT: 752 F (400 C) SUBLIMES MELTING POINT: 192 F (89 C)

SPECIFIC GRAVITY: 1.8 SOLUBILITY IN WATER: 19.6%

SOLVENT SOLUBILITY: PRACTICALLY INSOLUBLE IN ALCOHOL

FIRE AND EXPLOSION DATA

FIRE AND EXPLOSION HAZARD:
NEGLECTIBLE FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME.

FLASH POINT: NON-FLAMMABLE

FIREFIGHTING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, HALON, WATER SPRAY OR STANDARD FOAM
[1987 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.4].

FOR LARGER FIRES, USE WATER SPRAY, FOG OR STANDARD FOAM
[1987 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.4].

FIREFIGHTING:

MOVE CONTAINER FROM FIRE AREA IF POSSIBLE. DO NOT SCATTER SPILLED MATERIAL WITH HIGH PRESSURE WATER STREAMS. DIKE FIRE CONTROL WATER FOR LATER DISPOSAL [1987 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.4, GUIDE PAGE 31].

USE AGENTS SUITABLE FOR TYPE OF SURROUNDING FIRE. AVOID BREATHING HAZARDOUS VAPORS, KEEP UPWIND.

TOXICITY

CHROMIC POTASSIUM SULFATE, DODECAHYDRATE:

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112 MG/KG INTRAVENOUS-RAT LD50; TUMORIGENIC DATA (RTECS).
CARCINOGEN STATUS: HUMAN INADEQUATE EVIDENCE, ANIMAL INADEQUATE EVIDENCE
(IARC GROUP-3 FOR TRIVALENT CHROMIUM COMPOUNDS).
CHROMIC POTASSIUM SULFATE, DODECAHYDRATE IS A SOLUBLE CHROMIUM COMPOUND
WHICH EXHIBITS NO SIGNIFICANT SYSTEMIC TOXICITY. NO SPECIFIC EFFECTS ARE KNOWN
TO RESULT FROM INHALATION OR INGESTION. SENSITIZATION DERMATITIS MAY OCCUR IN
PREVIOUSLY EXPOSED INDIVIDUALS.

HEALTH EFFECTS AND FIRST AID

INHALATION:

CHROMIC POTASSIUM SULFATE, DODECAHYDRATE:

IRRITANT. 250 MG(CR)/M3 IMMEDIATELY DANGEROUS TO LIFE OR HEALTH.

ACUTE EXPOSURE- THE DUST IS IRRITATING TO THE NOSE AND THROAT AND MAY CAUSE
COUGHING OR DIFFICULTY IN BREATHING IN LARGE CONCENTRATIONS.

CHRONIC EXPOSURE- NO EFFECTS KNOWN IN HUMANS.

FIRST AID- REMOVE FROM EXPOSURE AREA TO FRESH AIR IMMEDIATELY. IF BREATHING
HAS STOPPED, PERFORM ARTIFICIAL RESPIRATION. KEEP PERSON WARM AND AT REST.
TREAT SYMPTOMATICALLY AND SUPPORTIVELY. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT:

CHROMIC POTASSIUM SULFATE, DODECAHYDRATE:

IRRITANT/SENSITIZER.

ACUTE EXPOSURE- CONTACT MAY RESULT IN IRRITATION AND REDNESS. SENSITIZATION
DERMATITIS MAY OCCUR IN PREVIOUSLY EXPOSED INDIVIDUALS.

CHRONIC EXPOSURE- REPEATED OR PROLONGED CONTACT MAY CAUSE DERMATITIS.

FIRST AID- REMOVE CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH AFFECTED
AREA WITH SOAP OR MILD DETERGENT AND LARGE AMOUNTS OF WATER UNTIL NO
EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 15-20 MINUTES). GET MEDICAL
ATTENTION IMMEDIATELY.

EYE CONTACT:

CHROMIC POTASSIUM SULFATE, DODECAHYDRATE:

IRRITANT.

ACUTE EXPOSURE- PARTICULATES IN THE EYE MAY CAUSE LACRIMATION AND
IRRITATION.

CHRONIC EXPOSURE- NO EFFECTS KNOWN IN HUMANS.

FIRST AID- WASH EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER OR NORMAL SALINE.
OCCASIONALLY LIFTING UPPER AND LOWER LIDS, UNTIL NO EVIDENCE OF CHEMICAL
REMAINS (APPROXIMATELY 15-20 MINUTES). GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:

CHROMIC POTASSIUM SULFATE, DODECAHYDRATE:

ACUTE EXPOSURE- WHEN TAKEN BY MOUTH, THIS TRIVALENT CHROMIUM COMPOUND
NORMALLY DOES NOT GIVE RISE TO LOCAL OR SYSTEMIC EFFECTS AND IS POORLY
ABSORBED INTO THE BODY.

CHRONIC EXPOSURE- NOT REPORTED IN HUMANS.

FIRST AID- IF PERSON IS CONSCIOUS, GIVE LARGE AMOUNTS OF WATER. TREAT
SYMPTOMATICALLY AND SUPPORTIVELY. GET MEDICAL ATTENTION.

ANTIDOTE:

NO SPECIFIC ANTIDOTE. TREAT SYMPTOMATICALLY AND SUPPORTIVELY.

REACTIVITY

REACTIVITY:

STABLE UNDER NORMAL TEMPERATURES AND PRESSURES.

DECOMPOSITION:

THERMAL DECOMPOSITION MAY RELEASE TOXIC OXIDES OF SULFUR.

POLYMERIZATION:

HAZARDOUS POLYMERIZATION HAS NOT BEEN REPORTED TO OCCUR UNDER NORMAL
TEMPERATURES AND PRESSURES.

STORAGE AND DISPOSAL

OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS WHEN STORING OR DISPOSING
OF THIS SUBSTANCE. FOR ASSISTANCE, CONTACT THE DISTRICT DIRECTOR OF THE
ENVIRONMENTAL PROTECTION AGENCY.

SPILL AND LEAK PROCEDURES

SOIL SPILL:

DIG HOLDING AREA SUCH AS LAGOON, POND OR PIT FOR CONTAINMENT.

USE PROTECTIVE COVER SUCH AS A PLASTIC SHEET TO PREVENT MATERIAL FROM
DISSOLVING IN FIRE EXTINGUISHING WATER OR RAIN.

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WATER SPILL:
USE ACTIVATED CARBON TO ABSORB SPILLED SUBSTANCE THAT IS DISSOLVED.

USE SUCTION HOSES TO REMOVE TRAPPED SPILL MATERIAL.

USE MECHANICAL DREDGES OR LIFTS TO EXTRACT IMMOBILIZED MASSES OF POLLUTION AND PRECIPITATES.

OCCUPATIONAL SPILL:
NO SPECIAL PRECAUTIONS INDICATED.

PROTECTIVE EQUIPMENT

VENTILATION:
PROVIDE LOCAL EXHAUST VENTILATION AND/OR GENERAL DILUTION VENTILATION TO MEET PUBLISHED EXPOSURE LIMITS.

RESPIRATOR:
CHROMIUM:

5 MG(CR)/M3- DUST AND MIST RESPIRATOR.

10 MG(CR)/M3- DUST AND MIST RESPIRATOR (EXCEPT SINGLE-USE AND QUARTER-MASK RESPIRATORS).
FUME OR HIGH-EFFICIENCY PARTICULATE RESPIRATOR.
SUPPLIED-AIR RESPIRATOR.
SELF-CONTAINED BREATHING APPARATUS.

50 MG(CR)/M3- HIGH-EFFICIENCY PARTICULATE RESPIRATOR WITH A FULL FACEPIECE.
SUPPLIED-AIR RESPIRATOR WITH A FULL FACEPIECE, HELMET OR HOOD.
SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE.

ESCAPE- POWERED-AIR PURIFYING RESPIRATOR WITH A HIGH-EFFICIENCY PARTICULATE FILTER.
TYPE 'C' SUPPLIED-AIR RESPIRATOR.
SUPPLIED-AIR RESPIRATOR OPERATED IN PRESSURE-DEMAND, POSITIVE PRESSURE, OR CONTINUOUS-FLOW MODE.

CLOTHING:
PROTECTIVE CLOTHING NOT REQUIRED. AVOID REPEATED OR PROLONGED CONTACT WITH THIS SUBSTANCE.

GLOVES:
PROTECTIVE GLOVES ARE NOT REQUIRED BUT RECOMMENDED.

EYE PROTECTION:
EYE PROTECTION NOT REQUIRED, BUT ADVISABLE.

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