Right to Know Hazardous Substance Fact Sheet

Emergency Responders Quick Reference

Common Name: **AMMONIUM DICHROMATE**

Synonyms: Ammonium Bichromate; Chromic Acid, Diammonium Salt
CAS No: 7789-09-5
Molecular Formula: $(NH_4)_2Cr_2O_7$
RTK Substance No: 0097
Description: Odorless, bright orange to red, crystalline solid

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
4 - Health **1 - Fire** **1 - Reactivity** **DOT#:** UN 1439 **ERG Guide #:** 141 **Hazard Class:** 5.1 (Oxidizer)	COMBUSTIBLE SOLID that can be readily ignited and burning produces a large cloud of green residue. **Ammonium Dichromate** is a STRONG OXIDIZER that enhances the combustion of other substances. Use water in flooding amounts to extinguish fire. POISONOUS GASES ARE PRODUCED IN FIRE, including *Chromic Oxide* and *Nitrogen Oxides*. CONTAINERS MAY EXPLODE IN FIRE. Use water spray to keep fire-exposed containers cool.	**Ammonium Dichromate** is a STRONG OXIDIZER that reacts violently with REDUCING AGENTS (such as LITHIUM, SODIUM, ALUMINUM and their HYDRIDES); HYDRAZINE; and STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE); and can ignite by friction with CARBIDE. Violent combustion may occur on contact with *finely divided* COMBUSTIBLES and ORGANICS (such as PAPER and WOOD). **Ammonium Dichromate** is not compatible with STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC); ALCOHOLS; ETHYLENE GLYCOL and MERCURY CYANIDE.

SPILL/LEAKS

Isolation Distance:

Spill: 25 meters (75 feet)

Fire: 800 meters (1/2 mile)

Moisten spilled material first or use a HEPA-filter vacuum for clean-up and place into sealed containers for disposal.

Neutralize liquid spills with agricultural lime ($CaCO_3$) or sodium bicarbonate ($NaHCO_3$).

DO NOT wash into sewer.
Ammonium Dichromate is dangerous to aquatic life at high concentrations.

PHYSICAL PROPERTIES

Odor Threshold:	Odorless
Flash Point:	Combustible
Auto Ignition Temp:	374º to 437ºF (190º to 225ºC)
Specific Gravity:	2.15 (water = 1)
Water Solubility:	Soluble
Boiling Point:	Decomposes
Melting Point:	338ºF (170ºC) (Decomposes)
Molecular Weight:	252.1

EXPOSURE LIMITS

OSHA: 0.005 mg/m^3, 8-hr TWA
NIOSH: 0.0002 mg/m^3, 8-hr TWA
ACGIH: 0.01 mg/m^3, 8-hr TWA
IDLH: 15 mg/m^3
(All the above are for *Chromium VI*)

The Protective Action Criteria values are:
PAC-1 = 0.37 mg/m^3 PAC-2 = 6.3 mg/m^3
PAC-3 = 38 mg/m^3

PROTECTIVE EQUIPMENT

Gloves: Nitrile, Neoprene and Natural Rubber (>8-hr breakthrough for **Ammonium Dichromate** in *solution*)

Coveralls: Tyvek® (for *solid* **Ammonium Dichromate**) and Tychem® BR, CSM and TK (>8-hr breakthrough for **Ammonium Dichromate** in *solution*)

Respirator: >0.0002 mg/m^3 – Pressure demand SCBA

HEALTH EFFECTS

Eyes: Irritation, burns and possible eye damage

Skin: Irritation and burns (skin absorbable)

Inhalation: Nose and throat irritation with coughing and wheezing

Chronic: Cancer (lung and stomach) in humans

FIRST AID AND DECONTAMINATION

Remove the person from exposure.

Flush eyes with large amounts of water for at least 30 minutes. Remove contact lenses if worn. Seek medical attention.

Quickly remove contaminated clothing. Immediately wash contaminated skin with large amounts of water.

Begin artificial respiration if breathing has stopped and CPR if necessary.

Transfer promptly to a medical facility