



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

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MSDS No. AA 255
Effective Date January 22, 1999

SECTION V HEALTH HAZARD DATA

AA 255

Threshold Limited Value TVL=0.05 mg/m³ (as Chromium) (ACGIH 1992-93). OSHA TWA=0.1 mg/m³ (as Chromate); Biological 40-50 micrograms (Cr)/liter in urine (Sampled at end of day).

Effects of Overexposure Will irritate skin and can cause ulcers. Will severely irritate eyes and can cause conjunctivitis. Inhalation will irritate and may ulcerate mucous membranes. Ingestion may be fatal. Hexavalent chromium compounds in the form of chromates and dichromates have been found to be mutagenic in bacterial and mammalian cells, including those of the Chinese hamster. Cancer hazard based on tests with laboratory animals.

Emergency and First Aid Procedures
INGESTION: If swallowed, if conscious, give one or two glasses of water to drink, induce vomiting. Repeat until vomit fluid is clear. Call physician immediately. Never give anything by mouth to an unconscious person. **SKIN:** Flush with water, then wash with mild soap and water. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention. **INHALATION:** If inhaled as dust or mist, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SECTION VI REACTIVITY DATA

Stability	Unstable		Conditions to Avoid	Avoid heat and ignition sources (sparks, flame, etc.)
	Stable	X		

Incompatibility (Materials to Avoid) Reducing agents-reaction can be violent. Can react explosively with certain substances at elevated temperatures. Other oxidizing agents, organic materials.

Hazardous Decomposition Products Carbon oxides, nitrogen oxides, ammonia.

Hazardous Polymerization	Conditions to Avoid		Not applicable.
	May Occur	Will Not Occur	
		X	

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled Sweep up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Waste Disposal Method

Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Dispose in accordance with federal, state and local regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type) None should be needed in normal laboratory handling. If dusty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved dust mask or respirator.

Ventilation	Local Exhaust	Recommended.	Special	No.
	Mechanical (General)	Recommended.	Other	No.

Protective Gloves Rubber. **Eye Protection** Chemical safety glasses.

Other Protective Equipment Goggles, lab coat, ventilation hood, proper gloves, eye wash station.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing Keep away from heat, sparks and open flame. Store in a cool, well-ventilated area. Avoid breathing dust or solution spray. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed when not in use.

Other Precautions Read label on container before using. Do not wear contact lenses when working with chemicals. The NIOSH criteria document for hexavalent chromium recommends that all chromium (VI) compounds be considered suspect carcinogens except Chromium Acid and its ammonium, sodium, potassium and lithium salts. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Revision No. 6	Date 1/22/99	Approved Michael Raszeja	Chemical Safety Coordinator MR
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The information contained herein is furnished without warranty of any kind. Employees should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. * Hazardous Materials Industrial Standards. Printed on recycled paper.

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	AMMONIUM DICHROMATE	<p>CHEMTREC 800-424-9300 Day 716-226-6177</p> <p>NFPA HAZARD RATING</p> <table border="1"> <tr> <td>LEAST</td> <td>SLIGHT</td> <td>MODERATE</td> <td>HIGH</td> <td>EXTREME</td> </tr> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> <p>HMIS * Health 4 Fire 1 Reactivity 3</p>	LEAST	SLIGHT	MODERATE	HIGH	EXTREME	0	1	2	3	4
LEAST	SLIGHT		MODERATE	HIGH	EXTREME							
0	1		2	3	4							
Chemical Synonyms	Ammonium Bichromate											
Formula	(NH ₄) ₂ Cr ₂ O ₇											
Unit Size	up to 2.5 Kg.											
C.A.S. No.	7789-09-5											

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Ammonium Dichromate	100%	See Section V.

DANGER! STRONG OXIDIZER! POISON. FLAMMABLE. SUSPECTED CARCINOGEN.

HARMFUL DUST. MAY CAUSE RASH OR ULCERS ON OPEN SKIN OR MUCOUS MEMBRANES.

CONTAINS HEXAVALENT CHROMIUM.

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SECTION III PHYSICAL DATA

Melting Point (°F)	Decomposes on heating.	Specific Gravity (H₂O = 1)	2.15 at 25°C.
Boiling Point (°F)	Decomposes at 180°C (356°F).	Percent Volatile by Volume (%)	N/A
Vapor Pressure (mm Hg)	Negligible as solid.	Evaporation Rate (=1)	N/A
Vapor Density (Air=1)	Data not listed.		
Solubility in Water	30% solution at 25°C.		
Appearance & Odor	Bright red-orange crystals; odorless.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Flammable solid.	Flammable Limits in Air % by Volume	N/A	Lower	Upper
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Extinguisher Media Water spray (may require flooding amounts).

SPECIAL FIREFIGHTING PROCEDURES Water runoff may contain hexavalent chromium and should not be allowed to enter sewers or waterways. Use a NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing if exposure to chromium dust or mist is possible. Cool fire-exposed containers with water spray.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 141)

UNUSUAL FIRE AND EXPLOSION HAZARDS

Will ignite if exposed to sparks or flame. Decomposes at about 180°C (356°F). Decomposes self-sustaining at about 225°C (437°F) with spectacular swelling and evolution of heat and gases, chiefly nitrogen and water vapor. Oxidizing material it can react explosively with organic materials at elevated temperature.

D.O.T. AMMONIUM DICHROMATE, 5.1, UN1439, PG II

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20