



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

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MSDS No. NN 150
Effective Date April 5, 1999

SECTION V HEALTH HAZARD DATA

NN 150

Threshold Limited Value ACGIH-TLV 8 HR TWA 1984-85: Soluble compounds as Ni.
As Nickel: CAS No. 7440-02-0 1 mg/m³. In fume or respirable air.

Effects of Overexposure **TARGET ORGANS AFFECTED:** Kidneys, liver, central nervous system. **INGESTION:** Causes irritation and may cause vomiting, gingivitis and stomatitis. **INHALATION:** Dust causes upper respiratory tract irritation and repeated exposure may result in lung damage. Individuals hypersensitive to nickel may develop asthma, bronchitis, shortness of breath, wheezing. **EYES:** Dust causes irritation. May cause acid burns. **SKIN:** Causes irritation. Repeated contact may cause allergic skin reaction. May cause acid burns.

Emergency and First Aid Procedures **EYES:** Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Flush exposed area with water, then wash with soap and water. Get medical attention if irritation persists. **INHALATION:** Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If discomfort or irritation persists, get medical attention. **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.

SECTION VI REACTIVITY DATA

Stability	Unstable		Conditions to Avoid	Excessive temperature or heat.
	Stable	X		

Incompatibility (Materials to Avoid) Strong reducing materials. It is incompatible with aluminum, boron phosphide, cyanides, esters and other combustibles; phospham, phosphorous, sodium hypochlorite, stannous chloride and thiocyanates.

Hazardous Decomposition Products Thermal decomposition or burning may produce oxides of nitrogen (NO_x) and nickel metal dust or fumes.

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 Wearing suitable protective clothing and avoid making dust, sweep up material and place in a suitable container for 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 of in an approved chemical landfill or contract with a licensed waste disposal agency.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type) Work in ventilation hood. If dusty conditions prevail, 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, eye wash station, proper gloves, ventilation hood.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing Protect against physical damage. Store in a cool, dry place; avoid storage on wood floors. Separate from combustible, organic and other readily oxidizable materials. Immediately remove and dispose of any spilled nitrate.
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.
Avoid contact with eyes, skin and clothing. Avoid breathing dust. Use with adequate ventilation. Remove and wash contaminated clothing. Wash thoroughly after handling.

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

Revision No. 6	Date 4/5/99	Approved Michael Raszeja	Chemical Safety Coordinator MR
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The information contained herein is furnished without warranty of any kind. Employers 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	NICKEL NITRATE	 CHEMTREC 800-424-9300 Day 716-226-6177 NFPA HAZARD RATING LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4 HMIS * Health 3 Fire 0 Reactivity 3
Chemical Synonyms	Nickelous Nitrate	
Formula	Ni(NO ₃) ₂ •6H ₂ O	
Unit Size	up to 2.5 Kg.	
C.A.S. No.	13478-00-7	

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Nickel Nitrate	100%	See Section V.
DANGER! STRONG OXIDIZER! HARMFUL IF INHALED OR SWALLOWED. CAUSES SKIN AND EYE IRRITATION. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE OR EXPLOSION.		

SECTION III PHYSICAL DATA

Melting Point (°F)	56.7°C (134°F)	Specific Gravity (H ₂ O = 1)	2.065 at 20°C
Boiling Point (°F)	136.7°C (278°F)	Percent Volatile by Volume (%)	N/A
Vapor Pressure (mm Hg)	Negligible as solid.	Evaporation Rate (=1)	N/A
Vapor Density (Air=1)	10.06		
Solubility in Water	243.0 grams in 100 mL. water at 0°C.		
Appearance & Odor	Green deliquescent crystals; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable.	Flammable Limits in Air % by Volume	N/A	Lower	Upper
Extinguisher Media	Water spray; carbon dioxide (CO ₂); dry chemical.				

SPECIAL FIREFIGHTING PROCEDURES Use flooding amounts of water in early stages of fire. When large quantities are involved in fire, nitrate may fuse, or melt, in which condition application of water may result in extensive scattering of molten material. In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 140)

UNUSUAL FIRE AND EXPLOSION HAZARDS This is an oxidizing material. In contact with easily oxidizable substances it may react rapidly enough to cause ignition, violent combustion or explosion. Increases the flammability of any combustible substance. Fire or excessive heat may produce hazardous decomposition of nickel dust or fume and oxide of nitrogen (NO_x).

D.O.T. Nickel nitrate, 5.1, UN 2725, PG III

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