



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

1533 W. Henrietta Rd.
Avon, New York 14414
(716) 226-6177

MSDS No. CC 361
Effective Date February 10, 1999

SECTION V HEALTH HAZARD DATA

CC 361

Threshold Limited Value

For Cobalt (CAS # 7440-48-4), as Co metal, dust and fume: TWA: 0.02 mg/m³ (ACGIH 1992-93). Nickel: TWA: 1.0 mg/m³ (ACGIH 1992-93). Toxicity data orl-rat LD50: 202 mg/kg (as CoO; CAS No. 1307-96-6).

Effects of Overexposure

Target organs affected: Kidneys, lungs.

This product causes eye irritation and may cause skin and upper respiratory tract irritation. Over-exposure to cobalt compounds may cause nose and throat irritation and allergic skin rash. If ingested, may cause vomiting, diarrhea and a sensation of hotness. Excessive inhalation and/or ingestion of cobalt salts may effect the kidneys, lungs and thyroid.

Emergency and First Aid Procedures

INGESTION: If conscious, give one or two glasses of water to drink, induce vomiting and call a physician. Never give anything by mouth to an unconscious person. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. If irritation persists, get medical attention. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call physician immediately. **SKIN:** Wash skin with mild soap and water.

SECTION VI REACTIVITY DATA

Stability	Unstable	Stable	Conditions to Avoid
		X	Excessive temperature producing fume of cobalt.

Incompatibility (Materials to Avoid)

None known.

Hazardous

Decomposition Products

Cobalt as metal, dust or fume.

Hazardous Polymerization

Conditions to Avoid

May Occur	Will Not Occur
	X

Not applicable.

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled

Recover for use if not contaminated. Wear protective safety equipment and use adequate ventilation. Avoid making dust. Sweep up and place in a suitable container for disposal. Flush spill area with water. Do not allow wash water to pollute water ways and streams.

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 service.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type)	None needed in normal laboratory handling. If dusty conditions prevail, work with a ventilation hood or wear a NIOSH/MSHA-approved dust mask.			
Ventilation	Local Exhaust	Recommended.	Special	No.
	Mechanical (General)	Recommended.	Other	Adequate to maintain below exposure limit.
Protective Gloves	Rubber.		Eye Protection	Chemical safety glasses.
Other Protective Equipment	Lab coat, eye wash station, proper gloves, ventilation hood.			

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing

Store in a cool, dry area. 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.

Avoid contact with skin, eyes and clothing. Avoid inhalation of dust. Use with adequate ventilation. Remove and wash contaminated clothing.

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

Revision	No. 4	Date	2/10/99	Approved	Michael Raszeja	Chemical Safety Coordinator	MR
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SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	COBALT OXIDE
Chemical Synonyms	Cobaltic - Cobaltous Oxide
Formula	Co ₃ O ₄
Unit Size	100 grams
C.A.S. No.	1308-06-1

0
1 0

CHEMTREC
800-424-9300
Day 716-226-6177

NFPA
HAZARD RATING

LEAST SLIGHT MODERATE
0 1 2

HMIS *

HIGH EXTREME
3 4

Health

1

Fire

0

Reactivity

1

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Cobalt Oxide: (CAS No. 1308-06-1)	Approx. 100%	See Section V.
Cobalt: (CAS No. 7440-48-4)	70-71%	0.02 mg/m ³ OSHA/PEL
Nickel Oxide: (CAS No. 1313-99-1)	0.28%	1.0 mg/m ³ OSHA/PEL

WARNING! MAY BE HARMFUL IF INHALED OR SWALLOWED. MAY CAUSE IRRITATION.

SECTION III PHYSICAL DATA

Melting Point (°F)	895°C (1643°F)	Specific Gravity (H ₂ O = 1)	5.2-6.1 @ 20°C
Boiling Point (°F)	Decomposes at 900°C (1652°F)	Percent Volatile by Volume (%)	Non-volatile.
Vapor Pressure (mm Hg)	Negligible as solid.	Evaporation Rate (=1)	Not applicable.
Vapor Density (Air=1)	Data not listed.		
Solubility in Water	Insoluble.		
Appearance & Odor	Black or gray crystalline powder; no odor. Hygroscopic.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable (NA).	Flammable Limits in Air % by Volume	N/A	Lower	Upper
Extinguisher Media	Use any media suitable for extinguishing supporting fire.				

SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH/MSHA-approved, self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may produce hazardous dust or fume.

D.O.T. NON-REGULATED.

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