

Material Safety Data Sheet

Cobalt Chloride

ACC# 91786

Section 1 - Chemical Product and Company Identification

MSDS Name: Cobalt Chloride

Catalog Numbers: AC, S75088

Synonyms: Cobalt dichloride, Cobaltous dichloride; Cobalt muriate.

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7646-79-9	Cobaltous chloride	100	231-589-4

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear light-blue solid.

Warning! Harmful if swallowed. Causes respiratory tract irritation. Causes eye and skin irritation. May cause cancer based on animal studies. Hygroscopic (absorbs moisture from the air). May cause sensitization by inhalation and by skin contact.

Target Organs: Lungs, cardiovascular system, skin.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. Chronic exposure may result in sensitization.

Ingestion: Harmful if swallowed. Causes gastrointestinal tract irritation.

Inhalation: Causes respiratory tract irritation. May cause asthmatic attacks due to allergic sensitization of the respiratory tract.

Chronic: Cobalt compounds may cause cancer based upon animal studies.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Use of chelators such as BAL penicillamine and N-acetylpenicillamine should be considered.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Wash clothing before reuse.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
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Cobaltous chloride	0.02 mg/m ³ TWA (as Co) (listed under Cobalt, inorganic compounds).	none listed	none listed
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OSHA Vacated PELs: Cobaltous chloride: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate clothing to prevent skin exposure.

Respirators: Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: clear light-blue

Odor: slight - sharp odor

pH: Not available.

Vapor Pressure: 40 mm Hg @ 770C

Vapor Density: 4.5

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 1049 deg C @ 760 mmHg

Freezing/Melting Point: 735 deg C

Decomposition Temperature: 400C (sublimes)

Solubility: soluble in alcohol and acetone

Specific Gravity/Density: 3.3560g/cm³

Molecular Formula: Cl₂Co

Molecular Weight: 129.84

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Dust generation, excess heat.

Incompatibilities with Other Materials: Moisture - oxidizing agents - alkali metals.

Hazardous Decomposition Products: Hydrogen chloride, chlorine, irritating and toxic fumes and gases, chloride fumes.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 7646-79-9: GF9800000

LD50/LC50:

CAS# 7646-79-9:

Oral, mouse: LD50 = 80 mg/kg;

Oral, rat: LD50 = 80 mg/kg;

Oral, rat: LD50 = 418 mg/kg;

Carcinogenicity:

CAS# 7646-79-9:

- **ACGIH:** A3 - Confirmed animal carcinogen with unknown relevance to humans (listed as 'Cobalt, inorganic compounds').
- **California:** Not listed.
- **NTP:** Not listed.
- **IARC:** Group 2B carcinogen (listed as Soluble cobalt (II) salts).

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: No information available.

Neurotoxicity: No information available.

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. *	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.
Hazard Class:	6.1	6.1
UN Number:	UN2927	UN2927
Packing Group:	I	I

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 7646-79-9 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 7646-79-9: immediate, delayed, reactive.

Section 313

This material contains Cobaltous chloride (listed as Cobalt compounds), 100%, (CAS# 7646-79-9) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 7646-79-9 (listed as Cobalt compounds) is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 7646-79-9 can be found on the following state right to know lists: Pennsylvania, (listed as Cobalt compounds), Minnesota, (listed as Cobalt, inorganic compounds).

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T N

Risk Phrases:

R 22 Harmful if swallowed.

R 42/43 May cause sensitization by inhalation and skin contact.

R 49 May cause cancer by inhalation.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 22 Do not breathe dust.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 53 Avoid exposure - obtain special instructions before use.

S 60 This material and its container must be disposed of as hazardous

s waste.

S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)

CAS# 7646-79-9: 2

Canada - DSL/NDSL

CAS# 7646-79-9 is listed on Canada's DSL List.

Canada - WHMIS

not available.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 7646-79-9 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information
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MSDS Creation Date: 4/12/2001

Revision #4 Date: 10/05/2004

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.