

# Material Safety Data Sheet

## Cobalt(II) chloride, hexahydrate, reagent ACS

ACC# 95993

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Cobalt(II) chloride, hexahydrate, reagent ACS

**Catalog Numbers:** AC423570000, AC423570050, AC423571000, AC423575000

**Synonyms:** Cobaltous chloride; Cobalt muriate.

**Company Identification:**

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

**For information in North America, call:** 800-ACROS-01

**For emergencies in the US, call CHEMTREC:** 800-424-9300

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7791-13-1	Cobalt(II) chloride hexahydrate	98	unlisted

**Hazard Symbols:** T N

**Risk Phrases:** 22 42/43 49

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: purple solid. **Warning!** Causes eye and skin irritation. Causes respiratory tract irritation. May cause lung damage. May cause cancer based on animal studies. May cause allergic skin reaction. May cause blood abnormalities. May be harmful if swallowed. Potential cancer hazard. May cause asthma. Dangerous for the environment.

**Target Organs:** Lungs, cardiovascular system, red blood cells, skin.

#### Potential Health Effects

**Eye:** Causes eye irritation.

**Skin:** Prolonged and/or repeated contact may cause irritation and/or dermatitis. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.

**Inhalation:** Causes delayed lung injury. Causes respiratory tract irritation. May cause asthmatic attacks due to allergic sensitization of the respiratory tract. May cause asthma and shortness of breath.

**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.

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

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

**Notes to Physician:** Treat symptomatically and supportively.

### 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. Non-combustible, substance itself does not burn but may decompose upon heating to produce irritating, corrosive and/or toxic fumes.

**Extinguishing Media:** Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

**Flash Point:** Noncombustible.

**Autoignition Temperature:** Not available.

**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:** Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances.

## 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
Cobalt(II) chloride hexahydrate	none listed	none listed	none listed

**OSHA Vacated PELs:** Cobalt(II) chloride hexahydrate: 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 protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

## Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** purple

**Odor:** none reported

**pH:** 4.6 @ M solution.

**Vapor Pressure:** Negligible.

**Vapor Density:** Not available.

**Evaporation Rate:** Negligible.

**Viscosity:** Not available.

**Boiling Point:** 110 deg C

**Freezing/Melting Point:** 86 deg C

**Decomposition Temperature:** Not available.

**Solubility:** 77 g/100ml (0°C)

**Specific Gravity/Density:** 1.92

**Molecular Formula:** CoCl<sub>2</sub>·6H<sub>2</sub>O

**Molecular Weight:** 237.93

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** Dust generation, excess heat.

**Incompatibilities with Other Materials:** Strong oxidizers and alkali metals. Absorbs NH<sub>3</sub> from air.

**Hazardous Decomposition Products:** Hydrogen chloride, irritating and toxic fumes and gases, cobalt/cobalt oxides.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

### RTECS#:

**CAS#** 7791-13-1: GG0200000

### LD50/LC50:

**CAS#** 7791-13-1:

Oral, rat: LD50 = 766 mg/kg;

Skin, rat: LD50 = >2 gm/kg;

### Carcinogenicity:

**CAS#** 7791-13-1:

**ACGIH:** A3 - Confirmed animal carcinogen with unknown relevance to humans (as Co) (list

**IARC:** Group 2B carcinogen (listed as Cobalt compounds).

**Epidemiology:** IARC Group 2B: Proven animal carcinogenic substance of potential relevance to humans. IARC Group 2B: No data available on human carcinogenicity, however sufficient evidence of carcinogenicity in animals.

**Teratogenicity:** No information found.

**Reproductive Effects:** No information found.

**Neurotoxicity:** No information found.

**Mutagenicity:** No information found.

**Other Studies:** See actual entry in RTECS for complete information.

## 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	IATA	RID/ADR	IMO	Canada TDG
<b>Shipping Name:</b>	NOT REGULATED FOR DOMESTIC TRANSPORT				No information available.
<b>Hazard Class:</b>					
<b>UN Number:</b>					
<b>Packing Group:</b>					

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 7791-13-1 is not listed on the TSCA inventory. It is for research and development use only.

#### 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.

#### SARA

#### 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 # 7791-13-1: acute, chronic.

#### Section 313

This material contains Cobalt(II) chloride hexahydrate (listed as Cobalt compounds), 98%, (CAS# 7791-13-1) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

#### Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

#### 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# 7791-13-1 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

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 waste.

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

**WGK (Water Danger/Protection)**

CAS# 7791-13-1: 2

**Canada - DSL/NDSL**

None of the chemicals in this product are listed on the DSL or NDSL list. **Canada - WHMIS**

This product has a WHMIS classification of D2A, D2B.

**Canadian Ingredient Disclosure List**

CAS# 7791-13-1 is not listed on the Canadian Ingredient Disclosure List.

**Exposure Limits**

Section 16 - Additional Information
-------------------------------------

**MSDS Creation Date:** 3/05/1998

**Revision #6 Date:** 10/08/2001

*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.*