

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 02.21.2015

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Cobalt Chloride Solution, 0.1M

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : Cobalt Chloride Solution, 0.1M

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25851

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331

Supplier Details:

Fisher Science Education
15 Jet View Drive, Rochester, NY 14624

Emergency telephone number:

Fisher Science Education Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:



Irritant

Skin sensitization, category 1
Respiratory sensitization, category 1



Health hazard

Germ cell mutagenicity, category 2
Carcinogenicity, category 1B
Reproductive toxicity, category 1B



Environmentally Damaging

Chronic hazards to the aquatic environment, category 2

Skin Sens. 1 H317
Resp. Sens. 1 H334
Muta. 2 H341
Carc. 1B H350
Repr. 1B H360
Aquatic Acute 2 H401
Aquatic Chronic 2 H411

Signal word : Danger

Hazard statements:

Harmful if swallowed
May cause an allergic skin reaction
May cause allergy or asthma symptoms or breathing difficulties if inhaled
Suspected of causing genetic defects
May cause cancer
May damage fertility or the unborn child
Toxic to aquatic life with long lasting effects

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Precautionary statements:

If medical advice is needed, have product container or label at hand
Keep out of reach of children
Read label before use
Obtain special instructions before use
Avoid release to the environment
Do not handle until all safety precautions have been read and understood
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves/protective clothing/eye protection/face protection
Use personal protective equipment as required
In case of inadequate ventilation wear respiratory protection
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
IF exposed or concerned: Get medical advice/attention
Collect spillage
IF ON SKIN: Wash with soap and water
If skin irritation or a rash occurs: Get medical advice/attention
Specific treatment (see supplemental first aid instructions on this label)
Wash contaminated clothing before reuse
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
Store locked up
Dispose of contents and container to an approved waste disposal plant

Other Non-GHS Classification:

WHMIS



NFPA/HMIS



NFPA SCALE (0-4)

Health	2
Flammability	0
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 7791-13-1	Cobalt (II) chloride, hexahydrate	2.38 %
CAS 7732-18-5	Deionized Water	97.62 %

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Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Loosen clothing and place exposed in a comfortable position. Seek medical assistance if cough or other symptoms appear.

After skin contact: Wash hands and exposed skin with soap and plenty of water. Seek medical attention if irritation persists or if concerned.

After eye contact: Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Seek medical attention if irritation persists or concerned.

After swallowing: Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention if irritation, discomfort, or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation. Shortness of breath. Headache. Nausea. Dizziness.;

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Irritating and highly toxic gases may be generated by thermal decomposition.

Advice for firefighters:

Protective equipment: Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational. Avoid contact with skin, eyes and clothing.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Refer to Section 8. Always obey local regulations. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal. Absorb spill with inert material (e.g. vermiculite, sand or earth). Neutralize spill with sodium bicarbonate.

Reference to other sections:

SECTION 7 : Handling and storage

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Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials.

SECTION 8 : Exposure controls/personal protection



Control Parameters:

7791-13-1, Cobalt (II) chloride hexahydrate, ACGIH TLV: 0.02 mg/m³ TWA

Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection:

Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

General hygienic measures:

Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before reusing wash contaminated clothing.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Clear, Pink-Purple Liquid	Explosion limit lower: Explosion limit upper:	Not Determined Not Determined
Odor:	Odorless	Vapor pressure:	Not Determined
Odor threshold:	Not Determined	Vapor density:	Not Determined
pH-value:	Not Determined	Relative density:	Not Determined
Melting/Freezing point:	Not Determined	Solubilities:	Soluble in water
Boiling point/Boiling range:	Not Determined	Partition coefficient (n-octanol/water):	Not Determined

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Flash point (closed cup):	Not Determined	Auto/Self-ignition temperature:	Not Determined
Evaporation rate:	Not Determined	Decomposition temperature:	Not Determined
Flammability (solid,gaseous):	Non-flammable	Viscosity:	a. Kinematic:Not Determined b. Dynamic: Not Determined
Density: Not Determined			

SECTION 10 : Stability and reactivity

Reactivity:Nonreactive under normal conditions.

Chemical stability:Stable under normal conditions.May decompose if over-heated.

Possible hazardous reactions:None under normal processing.

Conditions to avoid:Incompatible materials.Excess heat.

Incompatible materials:potassium and metal halides.sodium dispersions.t-butyl hydroperoxide.strong mineral acids.

Hazardous decomposition products:Oxides of cobalt.

SECTION 11 : Toxicological information

Acute Toxicity:		
Oral:	LD50 Rat 766 mg/kg	7791-13-1
Dermal:	LD50 Rat >2,000 mg/kg	7791-13-1
Chronic Toxicity: No additional information.		
Corrosion Irritation: No additional information.		
Sensitization:	No additional information.	
Single Target Organ (STOT):	No additional information.	
Numerical Measures:	No additional information.	
Carcinogenicity:	IARC: : Group 2B: Possibly carcinogenic to humans (Cobalt dichloride hexahydrate)	
Mutagenicity:	In vitro tests showed mutagenic effects (Cobalt dichloride hexahydrate). Mouse - mammary gland - Mutation in mammalian somatic cells (Cobalt dichloride hexahydrate)	
Reproductive Toxicity:	Presumed human reproductive toxicant. Presumed human reproductive toxicant (Cobalt dichloride hexahydrate)	

SECTION 12 : Ecological information

Ecotoxicity

7791-13-1: Fish LC50 - Cyprinus carpio (Carp) - 0.33 mg/l - 96.0 h

7791-13-1: invertebrates EC50 - Daphnia magna (Water flea) - 1.1 - 1.6 mg/l - 48 h

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7791-13-1: algae EC50 - Chlorella vulgaris (Fresh water algae) - 0.5 mg/l - 96 h

Persistence and degradability: Not determined.

Bioaccumulative potential: Not determined.

Mobility in soil: Not determined.

Other adverse effects: None identified.

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed together with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number

Not Regulated.

UN proper shipping name

Not Regulated.

Transport hazard class(es)

Packing group: Not Regulated.

Environmental hazard:

Transport in bulk:

Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients is listed

SARA Section 313 (Specific toxic chemical listings):

7791-13-1 Cobalt(II) Chloride Hexahydrate (Cobalt Compounds)

RCRA (hazardous waste code):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

7791-13-1 Cobalt(II) Chloride Hexahydrate (Cobalt Compounds)

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

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Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: . The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases:

Abbreviations and acronyms:

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