Preparing for the New Era of Laboratories

MATERIAL SAFETY DATA SHEET (MSDS)

According to regulation (EU) no.1907/2006

COBALT (II) CHLORIDE HEXAHYDRATE 98% AR

PRODUCT CODE : O-5067

CAS No : 7791-13-1

FORMULA : $CoCl_2.6\ H_2O$

UN No : 3077

website : www.labotiq.net

MATERIAL SAFETY DATA SHEET (SDS/MSDS)
COBALT (II) CHLORIDE HEXAHYDRATE 98% AR

MSDS Number : 0111 | Date : Aug 20th, 2024 | Version : 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Name : **COBALT (II) CHLORIDE HEXAHYDRATE 98% AR**
Synonyms : Cobaltous chloride, Cobalt dichloride, hexahydrate
CAS No. : 7791-13-1
HS Code : 2827 41 90
Chemical Formula : $CoCl_2.6\ H_2O$ Hill $Cl_2Co.6\ H_2O$
Molecular Weight : 237.90 g/mol
Product Code : O-5067
Brand : Labotiq
1.2 Manufacturer : Labotiq
Address : Jl.Terapi Raya AD2-Bumi Menteng Asri Bogor, Jawa Barat Indonesia – 16111
Website : www.labotiq.net
Email : labotiq.id@gmail.com,
For information : Phone : (+62-251) 839110, 8311662, Fax : (+62-251) 83135710
Emergency number : +6281316894650
1.3 Application : Laboratory chemicals, Manufacture of substances, General Chemical reagent

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 4), H302
Respiratory sensitisation (Category 1), H334
Skin sensitisation (Category 1), H317
Germ cell mutagenicity (Category 2), H341
Carcinogenicity, Inhalation (Category 1B), H350i
Reproductive toxicity (Category 1B), H360F
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word	Danger
Hazard statement(s)	
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H334	cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360F	May damage fertility.
H410	Very toxic to aquatic life with long lasting effects..
Precautionary statement(s)	
P273	Avoid release to the environment.

P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
Supplemental Hazard Statements	none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Cobaltous chloride, Cobalt dichloride, hexahydrate
Formula : $CoCl_2.6\ H_2O$ Hill $Cl_2Co.6\ H_2O$
Molecular weight : 237.90 g/mol
CAS-No. : 7791-13-1
EC-No. : 231-589-4
No. Indeks : 027-004-00-5

3.2 Mixture

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Cobalt dichloride hexahydrate Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH) CAS-No. . 7791-13-1 EC-No. 231-589-4 Index-No 027-004-00-5	Acute Tox. 4; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Carc. 1B; Repr. 1B; Aquatic Acute 1; Aquatic Chronic 1; H302, H334, H317, H341, H350i, H360F, H400, H410 Concentration limits: >= 0.01 %: Carc. 1B, H350i; M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 10	<=100 %

For the full text of the H-Statements mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture
Hydrogen chloride gas, Cobalt/cobalt oxides, Not combustible. Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage class

Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriat engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740, Size M)

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P3 The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure
Do not let product enter drains

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Form: powder Color: blue
Odour	No data available
Odour Threshold	No data available
pH	No data available
Melting point/freezingpoint	Melting point: 737 °C
Initial boiling point and boiling range	1.049 °C at 1.013 hPa.
Flash point	Not applicable
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or	No data available
explosive limits	No data available
Vapour pressure	1 mmHg at 51 °C
Vapour density	No data available
Relative density	3,36 g/cm3 at 25 °C
Water solubility	No data available
Partition coefficient: noctanol/water	log Pow: 0,85 - (Lit.), Bioaccumulation is not expected.
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other safety information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
Exposure to moisture

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
Other decomposition products - No data available Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Cobalt/cobalt oxides In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 766 mg/kg
Remarks: (RTECS)
Symptoms: Tremors, Diarrhea Inhalation: No data available
LD50 Dermal - Rat - > 2.000 mg/kg
Remarks: (RTECS)
The value is given in analogy to the following substances: Tricobalt tetraoxide

Skin corrosion/irritation
Possible damages: slight irritation

Serious eye damage/eye irritation
Possible damages: slight irritation

Respiratory or skin sensitisation
Local lymph node assay (LLNA) - Mouse
Result: May cause sensitization by skin contact. (OECD Test Guideline 429)
Remarks: The value is given in analogy to the following substances: cobalt(II) acetylacetonate (1:2)

Germ cell mutagenicity
Suspected of causing genetic defects.

Carcinogenicity
This product is or contains a component that has been reported to be proba EPA classification.(Cobalt dichloride hexahydrate)
Possible human carcinogen(Cobalt dichloride hexahydrate)

IARC:	2B - Group 2B: Possibly carcinogenic to humans (Cobalt dichloride hexahydrate)
	2B - Group 2B: Possibly carcinogenic to humans (Cobalt dichloride hexahydrate)

Reproductive toxicity
May damage fertility

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: GG0200000
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Symptoms of an acute cobalt intoxication: diarrhoea, loss of appetite, drop in body temperature, drop in blood pressure. Toxic effect on kidneys (proteinuria, anuria), heart, and pancreas. Other dangerous properties can not be excluded. This substance should be handled with particular care. Liver - Irregularities - Based on Human Evidence

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish(Chronic toxicity)
flow-through test NOEC - Pimephales promelas (fathead minnow) - 0,21 mg/l
Remarks: (ECHA)
The value is given in analogy to the following substances: Cobalt(II) chloride

Toxicity to daphnia and other aquatic invertebrates
Remarks: (ECHA)
(Chronic toxicity)
The value is given in analogy to the following substances: Cobalt(II) chloride (Cobalt dichloride hexahydrate)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d Result: 90 % - Readily biodegradable. (OECD Test Guideline 301B)

12.3 Bioaccumulative potential

Bioaccumulation is unlikely.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Dissolve or mix the material with a combustible solvent and burn in a chem scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in

accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 3077 IMDG: 3077 IATA: 3077

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cobalt dichloride hexahydrate)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cobalt dichloride hexahydrate)

IATA: Environmentally hazardous substance, solid, n.o.s. (Cobalt dichloride hexahydrate)

14.3 Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA: 9

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: no IATA: yes

14.6 Special precautions for user

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H341	Suspected of causing genetic defects. H350i May cause cancer by inhalation.
H360F	May damage fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

National Fire Protection Association (U.S.A.):
Health: 2
Flammability: 0
Reactivity: 0

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Labotiq shall not be held liable for any damage resulting from handling or from contact with the above product.

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