

**Safety data sheet**  
 according to UK REACH

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Version number 6.04 (replaces version 6.03)

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

· **1.1 Product identifier**

· **Trade name:** Cobalt(II) Chloride 6-hydrate

· **Article number:** 1257

· **CAS Number:**

7791-13-1

· **EC number:**

231-589-4

· **Application of the substance / the mixture** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

PANREAC QUIMICA S.L.U.

C/Garraf 2

Polígono Pla de la Bruguera

E-08211 Castellar del Vallès (Barcelona)

Tel. (+34) 937 489 400

Fax. (+34) 937 489 401

e-mail: product.safety@itwreagents.com

· **Further information obtainable from:** email: product.safety@panreac.com

· **1.4 Emergency telephone number:**

Single telephone number for emergency calls: 112 (EU)

Tel.: (+34) 937 489 499

**SECTION 2: Hazards identification**

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

Acute Tox. 4 H302 Harmful if swallowed.

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1A H350i May cause cancer by inhalation.

Repr. 1A H360F May damage fertility.

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the GB CLP regulation.

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· **Hazard pictograms**



GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard statements**

H302 Harmful if swallowed.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

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 statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P284 [In case of inadequate ventilation] wear respiratory protection.

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

· **3.1 Substances**

· **CAS No. Description**

7791-13-1 Cobalt(II) Chloride 6-hydrate

· **Identification number(s)**

· **EC number:** 231-589-4

· **SVHC**

7791-13-1 Cobalt(II) Chloride 6-hydrate

### SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Involve doctor immediately.

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Call a doctor immediately.

Immediately wash with water and soap and rinse thoroughly.

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- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
make victim drink water (maximum of 2 drinking glasses)  
Call a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**  
Hydrogen chloride (HCl)  
Phosgene gas  
Non-combustible.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Avoid formation of dust.  
Avoid substance contact.  
Ensure adequate ventilation
- **6.2 Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Avoid formation of dust.  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.  
Clean up affected area.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of dust.  
Any unavoidable deposit of dust must be regularly removed.
- **Information about fire - and explosion protection:**  
Keep respiratory protective device available.

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The product is not flammable.

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Open receptacle only under localised extractor facilities.  
Store under lock and key and with access restricted to technical experts or their assistants only.  
Keep container sealed.
- **Recommended storage temperature:** Room Temperature
- **Storage class:** 6.1 D
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Vacuum clean contaminated clothing. Do not blow or brush off contamination.
- **Respiratory protection:**  
Filter P3  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.  
Required when dusts are generated.
- **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact gloves made of the following materials are suitable:**  
Nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.11$  mm  
Value for the permeation: Level  $\geq 480$  min
- **As protection from splashes gloves made of the following materials are suitable:**  
Nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.11$  mm

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Value for the permeation: Level  $\geq$  480 min

· **Eye/face protection**



Tightly sealed goggles

· **Body protection:**

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

## SECTION 9: Physical and chemical properties

### · 9.1 Information on basic physical and chemical properties

#### · General Information

|                                                            |                           |
|------------------------------------------------------------|---------------------------|
| · Physical state                                           | Solid                     |
| · Colour:                                                  | Violet                    |
| · Odour:                                                   | Odourless                 |
| · Odour threshold:                                         | Not determined.           |
| · Melting point/freezing point:                            | 56 °C                     |
| · Boiling point or initial boiling point and boiling range | Undetermined.             |
| · Flammability                                             | Product is not flammable. |
| · Lower and upper explosion limit                          |                           |
| · Lower:                                                   | Not determined.           |
| · Upper:                                                   | Not determined.           |
| · Flash point:                                             | Not applicable.           |
| · Decomposition temperature:                               | Not determined.           |
| · pH                                                       | 4.9                       |
| · Viscosity:                                               |                           |
| · Kinematic viscosity                                      | Not applicable.           |
| · Dynamic:                                                 | Not applicable.           |
| · Solubility                                               |                           |
| · water at 100 °C:                                         | 191 g/l                   |
| · Partition coefficient n-octanol/water (log value)        | Not determined.           |
| · Vapour pressure:                                         | Not applicable.           |
| · Density and/or relative density                          |                           |
| · Density at 20 °C:                                        | 1.92 g/cm <sup>3</sup>    |
| · Relative density                                         | Not determined.           |
| · Bulk density:                                            | ~1,250 kg/m <sup>3</sup>  |
| · Vapour density                                           | Not applicable.           |

### · 9.2 Other information

|                                                                                 |                                               |
|---------------------------------------------------------------------------------|-----------------------------------------------|
| · Appearance:                                                                   |                                               |
| · Form:                                                                         | Solid                                         |
| · Important information on protection of health and environment, and on safety. |                                               |
| · Ignition temperature:                                                         | Not determined.                               |
| · Explosive properties:                                                         | Product does not present an explosion hazard. |
| · Molecular weight                                                              | 237.93 g/mol                                  |
| · Change in condition                                                           |                                               |
| · Evaporation rate                                                              | Not applicable.                               |

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- Information with regard to physical hazard classes
- Explosives Void
- Flammable gases Void
- Aerosols Void
- Oxidising gases Void
- Gases under pressure Void
- Flammable liquids Void
- Flammable solids Void
- Self-reactive substances and mixtures Void
- Pyrophoric liquids Void
- Pyrophoric solids Void
- Self-heating substances and mixtures Void
- Substances and mixtures, which emit flammable gases in contact with water Void
- Oxidising liquids Void
- Oxidising solids Void
- Organic peroxides Void
- Corrosive to metals Void
- Desensitised explosives Void

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** alkali metals
- **10.6 Hazardous decomposition products:** Chlorine

## SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful if swallowed.
- **LD/LC50 values relevant for classification:**  
Quantitative data on the toxicological effect of this product are not available.

| Components | Type | Value           | Species |
|------------|------|-----------------|---------|
| Oral LD50  |      | 766 mg/kg (rat) |         |

- **After inhalation:** No irritant effect.
- **Respiratory or skin sensitisation**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.
- **Germ cell mutagenicity** Suspected of causing genetic defects.
- **Carcinogenicity** May cause cancer by inhalation.
- **Reproductive toxicity** May damage fertility.

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- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.

| Type of test | Effective concentration | Method | Assessment |
|--------------|-------------------------|--------|------------|
| EC50         | 16 mg/l (Bakterien)     |        |            |
|              | 4 mg/l (fish)           |        |            |

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Very toxic for aquatic organisms

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Chemicals must be disposed of in compliance with the respective national regulations.  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:**  
Disposal must be made according to official regulations.  
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

## SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR, IMDG, IATA** UN3288
- **14.2 UN proper shipping name**
- **ADR** TOXIC SOLID, INORGANIC, N.O.S. (Cobalt chloride), ENVIRONMENTALLY HAZARDOUS
- **IMDG, IATA** TOXIC SOLID, INORGANIC, N.O.S. (Cobalt chloride)

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· **14.3 Transport hazard class(es)**

· **ADR**



· **Class**

6.1 (T5) Toxic substances.

· **Label**

6.1

· **IMDG**



· **Class**

6.1 Toxic substances.

· **Label**

6.1

· **IATA**



· **Class**

6.1 Toxic substances.

· **Label**

6.1

· **14.4 Packing group**

· **ADR, IMDG, IATA**

III

· **14.5 Environmental hazards:**

· **Marine pollutant:**

Environmentally hazardous substance, solid

· **Special marking (ADR):**

Symbol (fish and tree)

Symbol (fish and tree)

· **14.6 Special precautions for user**

· **Hazard identification number (Kemler code):**

Warning: Toxic substances.

· **EMS Number:**

60

· **Stowage Category**

F-A,S-A

A

· **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

5 kg

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **Transport category**

2

· **Tunnel restriction code**

E

· **IMDG**

· **Limited quantities (LQ)**

5 kg

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|                                   |                                                                                                                |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------|
| · <b>Excepted quantities (EQ)</b> | Code: E1<br>Maximum net quantity per inner packaging: 30 g<br>Maximum net quantity per outer packaging: 1000 g |
| · <b>UN "Model Regulation":</b>   | UN 3288 TOXIC SOLID, INORGANIC, N.O.S.<br>(COBALT CHLORIDE), 6.1, III,<br>ENVIRONMENTALLY HAZARDOUS            |

## SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Poisons Act**
  - **Regulated explosives precursors** Substance is not listed.
  - **Regulated poisons** Substance is not listed.
  - **Reportable explosives precursors** Substance is not listed.
  - **Reportable poisons** Substance is not listed.
  - **Directive 2012/18/EU**
  - **Named dangerous substances - ANNEX I** Substance is not listed.
  - **Seveso category** E1 Hazardous to the Aquatic Environment
  - **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
  - **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
  - **National regulations:**
  - **Information about limitation of use:**  
Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.
  - **Substances of very high concern (SVHC) according to UK REACH**
- |           |                               |
|-----------|-------------------------------|
| 7791-13-1 | Cobalt(II) Chloride 6-hydrate |
|-----------|-------------------------------|
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Abbreviations and acronyms:**  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organisation  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Acute Tox. 4: Acute toxicity – Category 4  
Resp. Sens. 1: Respiratory sensitisation – Category 1  
Skin Sens. 1: Skin sensitisation – Category 1  
Muta. 2: Germ cell mutagenicity – Category 2  
Carc. 1A: Carcinogenicity – Category 1A

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Repr. 1A: Reproductive toxicity – Category 1A

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· **\* Data compared to the previous version altered.**

GB