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## SECTION 1: COMPANY AND PRODUCT INFORMATION

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### 1.1 Product identifiers

Product name : Cobalt Dichloride Hexahydrate  
Product code : 40300100  
CAS number : 7791-13-1  
Synonyms : Cobaltous chloride

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : For research and laboratory use only.

### 1.3 Details of the supplier of the safety data sheet

Address : Genelix International Inc, dba bioWORLD  
4150 Tuller Rd. Suite 228  
Dublin, OH 43017  
Email : info@buffersandreagents.com  
Phone : 614-792-8680, Toll free: 1-888-bio-PLUS  
Fax : 614-792-8685

### 1.4 Emergency telephone number

Emergency phone : 1-888-bio-PLUS

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## SECTION 2: HAZARDS IDENTIFICATION

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### 2.1 Classification of substance or mixture

Acute toxicity, Oral (Category 4), H302  
Respiratory sensitisation (Category 1), H334  
Skin sensitisation (Category 1), H317  
Germ cell mutagenicity (Category 2), H341  
Carcinogenicity (Category 1B), H350  
Reproductive toxicity (Category 1B), H360  
Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 1), H410

### 2.2 GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302  
Respiratory sensitisation (Category 1), H334  
Skin sensitisation (Category 1), H317  
Germ cell mutagenicity (Category 2), H341  
Carcinogenicity (Category 1B), H350  
Reproductive toxicity (Category 1B), H360  
Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 1), H410

## 2.3 Label elements and precautionary statements

Pictogram	:	
Signal word	:	Danger
Hazard statement(s)	:	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. H350 - May cause cancer. H360 - May damage fertility or the unborn child. H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)	:	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P261 - Avoid breathing dust/fume/gas/mist/vapors/spray. P264 - Wash skin thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P272 - Contaminated work clothing should not be allowed out of the workplace. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P285 - In case of inadequate ventilation wear respiratory protection. P301+312+330 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. P302+352 - IF ON SKIN: Wash with plenty of soap and water. P304+341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. P308+313 - IF exposed or concerned: Get medical advice/attention. P333+313 - If skin irritation or rash occurs: Get medical advice/attention. P363 - Wash contaminated clothing before reuse. P391 - Collect spillage. P405 - Store locked up. P501 - Dispose of contents/container to an approved waste disposal plant.

## 2.4 Hazards not otherwise classified (HNOC) or not covered by GHS

No unclassified hazards known.

## 2.5 NFPA Rating

Health hazard : 0

Fire hazard : 0

Reactivity hazard : 0

## 2.6 HMIS Rating

Health hazard : 2

Chronic health hazard : \*

Reactivity hazard : 0

Flammability : 0

Physical hazard : 0

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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### 3.1 Substances

Substance	CAS#	EC#	Concentration
Cobalt dichloride hexahydrate M.F: $\text{Cl}_2\text{Co} \cdot 6\text{H}_2\text{O}$ M.W: 237.93 g/mol	7791-13-1	231-589-4	<= 100%

### 3.2 Hazardous components & classification

Acute Tox. 4; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Carc. 1B; Repr. 1B; Aquatic Acute 1; Aquatic Chronic 1; H302, H317, H334, H341, H350, H360, H410.

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## SECTION 4: FIRST AID MEASURES

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### 4.1 Description of first aid measures

#### General advice

Consult a physician if symptoms are severe or persistent. Provide this data sheet to medical personnel. If product is spilled or leaked, evacuate area.

#### In case of inhalation

If inhaled, move person to fresh air and monitor breathing. If not breathing, give artificial ventilation. Consult a physician if symptoms are severe or persistent.

#### In case of skin contact

Immediately wash with excess soap and water. If spilled on clothing, remove all affected clothing. Consult a physician if symptoms are severe or persistent.

#### In case of eye contact

Flush eyes with water or eye wash solution as a precaution for 15 minutes. Consult a physician if symptoms are severe or persistent.

#### In case of ingestion

Only induce vomiting if recommended by medical personnel. If subject is unconscious, do not give anything by mouth. If conscious, rinse mouth with water. Consult a physician if symptoms are severe or persistent.

### 4.2 Most important symptoms and effects, both acute and delayed

All known important symptoms are described in Section 2 and/or Section 11. No other important symptoms to report.

### 4.3 Indication of any immediate medical attention and special treatment needed

No special treatment indicated. Provide treatment in accordance with exhibited systems.

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## SECTION 5: FIREFIGHTING MEASURES

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### 5.1 Suitable extinguishing media

Water spray, alcohol-resistant foam, dry chemical, and carbon dioxide extinguishers are suitable.

### 5.2 Unsuitable extinguishing media

No known unsuitable extinguishing media.

### 5.3 Special hazards arising from the substance

No special hazards are known to exist regarding combustion of this product.

#### 5.4 Advice for firefighters

Wear protective gear, such as self-contained breathing apparatus, if necessary.

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### SECTION 6: ACCIDENTAL RELEASE MEASURES

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#### 6.1 Personal precautions, protective equipment and emergency procedures

Provide suitable ventilation. Use any necessary personal protective equipment. Avoid contact with skin and eyes, and avoid creation and inhalation of vapor or dust. Keep all unnecessary personnel away.

**For personal protection see section 8**

#### 6.2 Environmental precautions

Prevent product from entering public sewers and waterways.

#### 6.3 Methods and material for containment and cleaning up

Use inert absorbent material to absorb any spilled or leaked product. Keep in suitable, closed containers for disposal.

**For proper disposal see section 13**

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### SECTION 7: HANDLING AND STORAGE

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#### 7.1 Precautions for safe handling

Provide suitable ventilation. Wear any necessary personal protective equipment.

**For precautions see section 2**

#### 7.2 Conditions for safe storage, including any incompatibilities

Storage conditions : Store upright, closed container in arid, ventilated environment.

Incompatible materials : Oxidizing agents and alkali metals are incompatible with this product.

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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#### 8.1 Control parameters

Cobalt Chloride (II) Hexahydrate, CAS No.: 7791-13-1

TWA: 0.020000 mg/m<sup>3</sup>. Basis: USA. ACGIH Threshold Limit Values (TLV). Remarks: Pulmonary function, asthma, myocardial effects, substances for which there is a Biological Exposure Index or Indices (see BEI section), confirmed animal carcinogen with unknown relevance to humans varies.

#### 8.2 Engineering controls

Follow good industrial hygiene and safety practices when handling product.

#### 8.3 Personal protective equipment

Eye/face protection : Use only government-approved safety glasses with side-shields.

Skin protection : Use gloves when handling product. Inspect gloves before use to ensure suitability for use. Remove without exposing skin to the gloves outer surface. Discard used gloves according to all pertinent laws and/or current good practices (cGXP). Wash hands with soap and water.

- Body protection : Wear appropriate clothing. Ensure clothing is in good condition, with no holes or tears. When selecting clothing, consider the concentration and amount of substance to be handled.
- Respiratory protection : Use only approved respirators and components which comply with CDC and NIOSH (US) or CEN (EU) regulations. Required only when vapors or aerosols are created.
- Control of environmental exposure : Prevent product from entering the environment, especially through public sewers or waterways.
- General hygiene considerations : Comply with general industrial hygiene practice guidelines.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

- a) Appearance : Blue
- b) Physical states : Solid
- c) Odor : Not available
- d) Odor threshold : Not available
- e) Melting point : Not available
- f) Boiling point range : Not available
- g) pH : Not available
- h) Density : Not available
- i) Flash point : Not available
- j) Evaporation rate : Not available
- k) Flammability : Not available
- l) Upper/lower flammability or explosive limits: : Not available
- m) Vapor pressure : Not available
- n) Vapor density : Not available
- o) Relative density : 1.920 g/cm<sup>3</sup>
- p) Water solubility : Not available
- q) Partition coefficient:n-octanol/water : Not available
- r) Autoignition temperature : Not available
- s) Decomposition temperature : Not available
- t) Kinematic viscosity : Not available
- u) Explosive properties : Not available
- v) Oxidizing properties : Not available
- w) Solubility in other solvents : Not available
- x) Surface tension : Not available

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## SECTION 10: STABILITY AND REACTIVITY

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### 10.1 Reactivity

No special reactivity is known.

### 10.2 Chemical stability

Product is stable when stored and used as recommended.

### 10.3 Stability note(s)

Avoid exposing the product to moisture.

### 10.4 Polymerization

No known polymerization.

### 10.5 Possibility of hazardous reactions

No hazardous reactions are known.

### 10.6 Incompatible materials

Oxidizing agents and alkali metals are incompatible with this product.

### 10.7 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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### 11.1 Acute toxicity

LD50 Oral : Rat - 766 mg/kg

LD50 Dermal : Rat - > 2000 mg/kg

LC50 Inhalation : No toxicity data available.

### 11.2 Skin corrosion/irritation

No skin/corrosion irritation data available.

### 11.3 Serious eye damage/eye irritation

No eye damage/irritation data available.

### 11.4 Respiratory or skin sensitization

No sensitization data available.

### 11.5 Germ cell mutagenicity

Mouse studies have shown mutations in mammalian somatic cells.

### 11.6 Carcinogenicity

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

ACGIH : Product and components are not regulated by the ACGIH.

NTP : Product and components are not regulated by the NTP.

OSHA : Product and components are not regulated by OSHA.

### 11.7 Reproductive toxicity

Presumed to be a human reproductive toxicant.

### 11.8 Specific target organ toxicity – single exposure

No specific organ toxicity data available.

#### **11.9 Specific target organ toxicity – repeated exposure**

No specific organ toxicity data available.

#### **11.10 Aspiration hazard**

No aspiration hazard data available.

#### **11.11 Additional Information**

RTECS:GG0200000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Liver - Irregularities - Based on Human Evidence.

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### **SECTION 12: ECOLOGICAL INFORMATION**

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#### **12.1 Toxicity**

Species: Water Flea (*Daphnia magna*). Exposure: 48 hours. Result: EC50 1.1-1.6 mg/L

#### **12.2 Aquatic toxicity**

Species: Carp (*Cyprinus carpio*). Exposure: 96 hours. Result: 0.33 mg/L

Species: Fresh Water Algae (*Chlorella vulgaris*). Exposure: 96 hours. Result: 0.5 mg/L

#### **12.3 Persistence and degradability**

No persistence/degradability data available.

#### **12.4 Bioaccumulative potential**

No bioaccumulation data available.

#### **12.5 Mobility in soil**

No soil mobility data available.

#### **12.6 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment is not required/was not conducted.

#### **12.7 Other adverse effect**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

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### **SECTION 13: DISPOSAL CONSIDERATIONS**

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#### **13.1 Product**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult and adhere to local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

#### **13.2 Packaging**

Packaging should be disposed of in the same manner as unused product.

#### **13.3 Recommendation**

Disposal must be made according to official regulations.

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### **SECTION 14: TRANSPORTATION INFORMATION**

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#### **14.1 DOT (US)**

Not a dangerous good under DOT(US) regulations.

## 14.2 IMDG

UN#3077

Class: 9

Packing group: III

EMS-No: F-A, S-F

Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Cobalt dichloride hexahydrate)

Marine pollutant: Yes

## 14.3 IATA

UN#3077

Class: 9

Packing group: III

Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Cobalt dichloride hexahydrate).

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 > 5 L for liquids or > 5 kg for solids.

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## SECTION 15: REGULATORY INFORMATION

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### 15.1 SARA

SARA 302: This product and components are not subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This product contains components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

Cobalt Chloride (II), Hexahydrate CAS No.: 7791-13-1

SARA 311/312: Acute Health Hazard, Chronic Health Hazard

### 15.2 Clean water act (CWA)

No chemicals are present in this product that are subject to regulation under the Clean Water Act.

### 15.3 Right to know components

Massachusetts : No chemicals are present which require disclosure under the Massachusetts Right to Know Act.

Pennsylvania : Cobalt Chloride (II), Hexahydrate CAS No.: 7791-13-1

New Jersey : Cobalt Chloride (II), Hexahydrate CAS No.: 7791-13-1

California : This product contains no chemicals which are known to the State of  
proposition 65 California to cause cancer, or birth defects or other reproductive harm.  
components

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## SECTION 16: OTHER INFORMATION

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### 16.1 Disclaimer



This product is offered by Plantmedia for research, laboratory or further manufacturing use. Not for human use or consumption. The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchant-ability 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 buffersandreagents.com 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 buffersandreagents.com has been advised of the possibility of such damages.

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## **16.2 Preparation Information**

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