

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/01/2021

Reviewed on 06/01/2021

## 1 Identification

- **Product identifier**
- **Trade name:** Cobalt(ic) Oxide Reagent Grade, Powder
- **Article number:** C5831
- **CAS Number:**  
1308-06-1
- **EC number:**  
215-157-2
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Aqua Solutions, Inc.  
6913 Highway 225  
DEER PARK, TX 77536  
USA  
800-256-2586
- **Information department:**  
Technical Coordinator  
Sherman Nelson [shermann@aquasolutions.org](mailto:shermann@aquasolutions.org)
- **Emergency telephone number:**  
Chemtec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carc. 1B H350 May cause cancer.



GHS07

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

- **Label elements**

- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Danger

- **Hazard statements**

May cause an allergic skin reaction.

May cause cancer.

- **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace.

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*Wear protective gloves/protective clothing/eye protection/face protection.*

*If on skin: Wash with plenty of water.*

*IF exposed or concerned: Get medical advice/attention.*

*Specific treatment (see on this label).*

*If skin irritation or rash occurs: Get medical advice/attention.*

*Wash contaminated clothing before reuse.*

*Store locked up.*

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

1308-06-1 Cobalt(ic) Oxide

· **Identification number(s)**

· **EC number:** 215-157-2

### 4 First-aid measures

· **Description of first aid measures**

· **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:** *Immediately wash with water and soap and rinse thoroughly.*

· **After eye contact:** *Rinse opened eye for several minutes under running water.*

· **After swallowing:** *If symptoms persist consult doctor.*

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*

· **Indication of any immediate medical attention and special treatment needed**

*No further relevant information available.*

### 5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** *Use fire fighting measures that suit the environment.*

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- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** 0.082 mg/m<sup>3</sup>
- **PAC-2:** 4.5 mg/m<sup>3</sup>
- **PAC-3:** 27 mg/m<sup>3</sup>

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**CAS: 1308-06-1 Cobalt(ic) Oxide**

PEL	Long-term value: 0.1* mg/m <sup>3</sup> as Co; *for metal dust and fume
REL	Long-term value: 0.05 mg/m <sup>3</sup> as Co; metal dust & fume
TLV	Long-term value: 0.02* mg/m <sup>3</sup> as Co, *inhalable; DSEN; RSEN; BEI

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**· Ingredients with biological limit values:**

**CAS: 1308-06-1 Cobalt(ic) Oxide**

BEI	15 µg/L LD50 Intraperitoneal: urine Time: end of shift at end of workweek LD50: Cobalt (background)
	1 µg/L LD50 Intraperitoneal: urine Time: end of shift at end of workweek LD50: Cobalt (background, semi-quantitative)

**· Additional information:** The lists that were valid during the creation were used as basis.

**· Exposure controls**

**· 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.

**· Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

**· Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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.

**· Eye protection:**



Tightly sealed goggles

**· Body protection:** Protective work clothing

## 9 Physical and chemical properties

**· Information on basic physical and chemical properties**

**· General Information**

**· Appearance:**

**Form:** Powder

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<b>Color:</b>	Not determined.
<b>· Odor:</b>	Characteristic
<b>· Odor threshold:</b>	Not determined.
<b>· pH-value:</b>	Not applicable.
<b>· Change in condition</b>	
<b>Melting point/Melting range:</b>	895 °C (1,643 °F)
<b>Boiling point/Boiling range:</b>	Undetermined.
<b>· Flash point:</b>	Not applicable.
<b>· Flammability (solid, gaseous):</b>	Product is not flammable.
<b>· Decomposition temperature:</b>	Not determined.
<b>· Auto igniting:</b>	Not determined.
<b>· Danger of explosion:</b>	Product does not present an explosion hazard.
<b>· Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>· Vapor pressure:</b>	Not applicable.
<b>· Density at 20 °C (68 °F):</b>	6.11 g/cm <sup>3</sup> (50.98795 lbs/gal)
<b>· Bulk density:</b>	780 kg/m <sup>3</sup>
<b>· Relative density</b>	Not determined.
<b>· Vapor density</b>	Not applicable.
<b>· Evaporation rate</b>	Not applicable.
<b>· Solubility in / Miscibility with</b>	
<b>Water:</b>	Not determined.
<b>· Partition coefficient (n-octanol/water):</b>	Not determined.
<b>· Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
<b>· Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

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## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer) 2B**
- **NTP (National Toxicology Program) Substance is not listed.**
- **OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.**

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
- **Water hazard class 1 (Assessment by list):** slightly hazardous for water
- **Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
- **Must not be disposed of together with household garbage. Do not allow product to reach sewage system.**
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |                                  |               |
|----------------------------------|---------------|
| · <b>UN-Number</b>               |               |
| · <b>DOT, ADN, IMDG, IATA</b>    | Not regulated |
| · <b>UN proper shipping name</b> |               |
| · <b>DOT, ADN, IMDG, IATA</b>    | Not regulated |

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· <b>Transport hazard class(es)</b>	
· <b>DOT, ADN, IMDG, IATA</b>	
· <b>Class</b>	Not regulated
· <b>Packing group</b>	
· <b>DOT, IMDG, IATA</b>	Not regulated
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>DOT</b>	
· <b>Remarks:</b>	Not regulated
· <b>IMDG</b>	
· <b>Remarks:</b>	Not regulated
· <b>IATA</b>	
· <b>Remarks:</b>	Not regulated
· <b>UN "Model Regulation":</b>	Not regulated

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is listed.
- **TSCA (Toxic Substances Control Act):** ACTIVE
- **Hazardous Air Pollutants** Substance is listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value) A3**
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Danger

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- **Hazard statements**

*May cause an allergic skin reaction.*

*May cause cancer.*

- **Precautionary statements**

*Obtain special instructions before use.*

*Do not handle until all safety precautions have been read and understood.*

*Avoid breathing dust/fume/gas/mist/vapors/spray*

*Contaminated work clothing must not be allowed out of the workplace.*

*Wear protective gloves/protective clothing/eye protection/face protection.*

*If on skin: Wash with plenty of water.*

*IF exposed or concerned: Get medical advice/attention.*

*Specific treatment (see on this label).*

*If skin irritation or rash occurs: Get medical advice/attention.*

*Wash contaminated clothing before reuse.*

*Store locked up.*

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

- **National regulations:**

- **Additional classification according to Decree on Hazardous Materials:**

*Carcinogenic hazardous material group I (extremely dangerous).*

*Carcinogenic hazardous material group II (very dangerous).*

*Carcinogenic hazardous material group III (dangerous).*

- **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.*

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 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.*

- **Department issuing SDS:** Environment protection department.

- **Contact:**

- **Date of preparation / last revision**

*Creation date for SDS 08-06-2014. STN*

*Revision 1.0 05-07-2021: updated hazard information. STN*

*06/01/2021 / 1.0*

- **Abbreviations and acronyms:**

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety & Health*

*TLV: Threshold Limit Value*

*PEL: Permissible Exposure Limit*

*REL: Recommended Exposure Limit*

*BEI: Biological Exposure Limit*

*Skin Sens. 1: Skin sensitisation – Category 1*

*Carc. 1B: Carcinogenicity – Category 1B*

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