



## Safety Data Sheet

In accordance with CFR 1910.1200 (OSHA HCS)

SDS No. 596

Date of review: October 12, 2018

### 1 Identification of substance and company

**Product name:** **Cobalt (II) hydroxide**  
**Product code:** 15580, C2396  
**Relevant use and restrictions on use:** Research and product development  
**Manufacturer/Supplier:** Noah Technologies Corporation  
1 Noah Park  
San Antonio, Texas 78249-3419  
Phone: 210-691-2000  
Fax: 210-691-2600  
Web site: www.noahtech.com  
**Emergency information:** CHEMTREC  
800-424-9300

### 2 Hazards identification

#### Emergency Overview:

#### Pictogram(s):



#### Signal word(s):

Danger

#### Hazard statements:

H302+H332 Harmful if swallowed or if inhaled  
H317 May cause an allergic skin reaction  
H319 Causes serious eye irritation  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H351 Suspected of causing cancer  
H410 Very toxic to aquatic life with long lasting effects

#### Precautionary statements:

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  
P271 Use only outdoors or in a well-ventilated area  
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+340+312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.  
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+313 IF exposed or concerned: Get medical advice/attention  
P333+313 If skin irritation or rash occurs: Get medical advice/attention  
P337+313 If eye irritation persists: 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

#### GHS Classification:

Acute toxicity, Oral - 4  
Acute toxicity, Inhalation - 4  
Eye irritation - 2A

Respiratory sensitization - 1  
Skin sensitization - 1  
Carcinogenicity - 2  
Acute aquatic toxicity - 1  
Chronic aquatic toxicity - 1  
**Hazards not otherwise classified:** None

**HMIS ratings (scale 0-4):**  
Health hazard: 2\*  
Flammability: 0  
Physical hazard: 0

### 3 Composition/Information on ingredients

**Chemical name:** Cobalt (II) hydroxide  
**Designation:**  
**CAS number:** 21041-93-0  
**EC number:** 244-166-4  
**Formula:** Co(OH)<sub>2</sub>  
**Synonyms:** Cobaltous hydroxide, cobalt hydrate, cobalt dihydroxide

### 4 First aid measures

**After inhalation:** Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.  
**After skin contact:** Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.  
**After eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.  
**After ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.  
**Information for doctor:** Show this safety data sheet to the doctor in attendance  
**Symptoms/effects; acute and delayed:** If ingested, may cause vomiting, diarrhea and a sensation of hotness. Excessive inhalation or ingestion of cobalt salts may affect the kidneys, lungs and thyroid. Exposure to cobalt compounds may cause sensitization by inhalation and skin contact. Dust from handling can cause irritation of nose and throat. Prolonged exposure could cause serious respiratory illness and lung damage. Sensitized persons may develop wheezing and shortness of breath. Can also cause an allergic skin rash in some individuals.  
**Immediate medical attention and special treatment needed:** See above

### 5 Fire-fighting measures

**Suitable and unsuitable extinguishing agents:** Water spray, alcohol-resistant foam, dry chemical or carbon dioxide  
**Special hazards caused by the material, its products of combustion or resulting gases:** Oxides of cobalt  
**Special fire fighting procedures:** Wear self-contained breathing apparatus and fully protective fire fighting equipment/clothing  
**Unusual fire and explosion hazard:** No available data

### 6 Accidental release measures

**Person-related safety precautions:** Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.  
**Measures for environmental protection:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.  
**Measures for cleaning/collecting:** Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for proper disposal.  
**Additional information:** See Section 7 for information on safe handling  
See Section 8 for information on personal protective equipment  
See Section 13 for information on disposal  
See Section 15 for regulatory information

### 7 Handling and storage

**Information for safe handling:** Avoid contact with skin and eyes. Avoid dust formation. Provide appropriate exhaust ventilation.  
**Information about protection against explosions and fires:** No data available  
**Storage requirements to be met by storerooms and containers:** Keep container tightly closed in a dry and well-ventilated place  
**Incompatibility (avoid contact with):** Strong acids and oxidizers  
Water/moisture

### 8 Exposure controls/personal protection

**Ventilation requirements:** Local exhaust, chemical fume hood  
**Components with exposure limits that require monitoring:** ACGIH TLV: TWA 0.02 mg(Co)/m<sup>3</sup>

<b>General protective and hygienic measures:</b>	The usual precautionary measures for handling chemicals should be adhered to Keep away from foodstuffs, beverages and food Instantly remove any soiled and impregnated garments Wash hands during breaks and at the end of the work Avoid contact with the eyes and skin
<b>Personal protective equipment:</b>	
<b>Respiratory protection:</b> (Use only NIOSH or CEN approved Equipment)	Filter-dust, fume, mist; respirator equipped with HEPA
<b>Hand protection:</b>	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique.
<b>Eye protection:</b>	Safety glasses, goggles
<b>Skin protection:</b>	Completely covering work attire with full length apron
<b>Additional protective equipment:</b>	Sufficient to prevent contact. Emergency eyewash and safety shower
<b>Precautionary labeling:</b>	Wash thoroughly after handling Do not get in eyes, on skin or on clothing Do not breathe dust, vapor, mist, gas Keep away from heat, sparks, and open flames Empty container may contain hazardous residues

### 9 Physical and chemical properties

<b>Physical state:</b>	Powder
<b>Color:</b>	Pink
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	No data available
<b>Molecular Weight (Calculated):</b>	92.95
<b>pH</b>	No data available
<b>Melting point/freezing point/range:</b>	250 C (decomposes)
<b>Boiling point/range:</b>	No data available
<b>Sublimation temperature/start:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Flammability (solid, gas):</b>	Non-flammable
<b>Flash point:</b>	No data available
<b>Autoignition temperature:</b>	No data available
<b>Danger of explosion:</b>	No data available
<b>Flammable limits:</b>	
<b>Lower:</b>	No data available
<b>Upper:</b>	No data available
<b>Evaporation Rate:</b>	No data available
<b>Vapor pressure (mm Hg):</b>	No data available
<b>Vapor density:</b>	No data available
<b>Specific gravity:</b>	3.597
<b>Bulk density:</b>	No data available
<b>Solubility in/Miscibility with water:</b>	0.0032 g/L @ 20 C
<b>Partition coefficient n-octanol/water:</b>	No data available
<b>Viscosity:</b>	No data available
<b>Other information:</b>	No additional information

### 10 Stability and reactivity

<b>Reactivity:</b>	Not determined
<b>Chemical stability:</b>	Stable under recommended storage conditions
<b>Possibility of hazardous reactions:</b>	Not determined
<b>Conditions to be avoided:</b>	Heat, contact with incompatibles
<b>Materials to be avoided:</b>	See section 7 for information on proper handling and storage
<b>Dangerous reactions:</b>	Not determined
<b>Hazardous decomposition products:</b>	Oxides of cobalt

### 11 Toxicological information

<b>LD/LC50 values that are relevant for classification:</b>	oral-rat LD <sub>50</sub> : 1060 mg/kg
<b>Irritation or corrosion of skin:</b>	No data available
<b>Irritation or corrosion of eyes:</b>	No data available
<b>Primary irritant or corrosive effect:</b>	
<b>on the skin:</b>	No data available
<b>on the eye:</b>	No data available
<b>Sensitization:</b>	Allergen, respiratory sensitizer, skin sensitizer
<b>Potential health effects:</b>	
<b>Inhalation:</b>	May cause pulmonary asthma
<b>Ingestion:</b>	May cause intestinal disorders, convulsions and asphyxia
<b>Skin:</b>	May cause sensitization

<b>Eyes:</b>	May cause allergic conjunctivitis
<b>Signs and symptoms of exposure:</b>	If ingested, may cause vomiting, diarrhea and a sensation of hotness. Excessive inhalation or ingestion of cobalt salts may affect the kidneys, lungs and thyroid. Exposure to cobalt compounds may cause sensitization by inhalation and skin contact. Dust from handling can cause irritation of nose and throat. Prolonged exposure could cause serious respiratory illness and lung damage. Sensitized persons may develop wheezing and shortness of breath. Can also cause an allergic skin rash in some individuals. To the best of our knowledge the acute and chronic toxicity of this substance is not fully known
<b>Carcinogenicity:</b>	IARC- 2B: Possibly carcinogenic to humans
<b>Additional information:</b>	No additional information

### 12 Ecotoxicological information

<b>Toxicity:</b>	
<b>Toxicity to fish:</b>	No data available
<b>Toxicity to daphnia and other aquatic invertebrates:</b>	No data available
<b>Toxicity to algae:</b>	No data available
<b>Persistence and degradability:</b>	
<b>Biodegradability:</b>	No data available
<b>Bioaccumulative potential:</b>	
<b>Bioaccumulation:</b>	No data available
<b>Mobility in soil:</b>	No data available
<b>Other adverse effects:</b>	Very toxic to aquatic life with long lasting effects

### 13 Disposal considerations

<b>Recommendation:</b>	Consult state, local or national regulation for proper disposal Allow professional disposal company to handle waste Must be specially treated under adherence to official regulations
<b>Unclean packagings recommendation:</b>	Disposal must be made according to official regulations

### 14 Transport information

#### Land transport DOT



<b>Proper shipping name:</b>	Environmentally hazardous substance, solid, n.o.s.
<b>Technical name:</b>	Cobalt (II) hydroxide
<b>DOT Hazard Class:</b>	9
<b>UN Identification number:</b>	UN3077
<b>Label(s):</b>	Class 9
<b>Packing group:</b>	III
<b>North American Emergency Response Guidebook No.:</b>	171

#### Air transport ICAO-TI and IATA-DGR:



<b>Proper shipping name:</b>	Environmentally hazardous substance, solid, n.o.s.
<b>Technical name:</b>	Cobalt (II) hydroxide
<b>DOT Hazard Class:</b>	9
<b>UN Identification number:</b>	UN3077
<b>Label(s):</b>	Class 9
<b>Packing group:</b>	III
<b>North American Emergency Response Guidebook No.:</b>	171

#### UPS Ground / FedEx Ground



<b>Proper shipping name:</b>	Environmentally hazardous substance, solid, n.o.s.
<b>Technical name:</b>	Cobalt (II) hydroxide

**DOT Hazard Class:** 9  
**UN Identification number:** UN3077  
**Label(s):** Class 9  
**Packing group:** III  
**North American Emergency Response Guidebook No.:** 171

UPS Air



**Proper shipping name:** Environmentally hazardous substance, solid, n.o.s.  
**Technical name:** Cobalt (II) hydroxide  
**DOT Hazard Class:** 9  
**UN Identification number:** UN3077  
**Label(s):** Class 9  
**Packing group:** III  
**North American Emergency Response Guidebook No.:** 171

#### 15 Regulatory information

**SARA Section 302 Extremely Hazardous components and corresponding TPQs:** Not subject  
**SARA Section 311 / 312 hazards:** Acute Health Hazard, Chronic Health Hazard  
**SARA Section 313 components:** This product contains chemical(s) subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-to-know Act of 1986 and 40CFR372  
**California Proposition 65 components:** Not subject  
**TSCA:** Product is listed on TSCA Inventory

#### 16 Other information

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulation are subject to change and the conditions of handling and use, or misuse are beyond our control. NOAH MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. User should satisfy himself that he has all current data relevant to his particular use.