

SAFETY DATA SHEET

Date Accessed: 25/08/2023

Date Revised: 02/02/2023

SECTION 1. IDENTIFICATION

Product Name: Cobalt(II) Carbonate Hydrate

CAS #: 57454-67-8

Relevant identified uses of the substance: Scientific research and development

Supplier details:

Stanford Advanced Materials

E-mail: sales@samaterials.com

Tel: (949) 407-8904

Address: 23661 Birtcher Dr., Lake Forest, CA 92630 U.S.A.

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Skin sensitisation (Category 1), H317

Carcinogenicity (Category 2), H351

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Signal word: Warning

Hazard statement(s):

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer. 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/ vapours/ 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.

P280 Wear eye protection/ face protection.

P280 Wear protective gloves.

P281 Use personal protective equipment as required.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : $\text{CCoO}_3 \cdot x\text{H}_2\text{O}$

Molecular weight : 118.94 g/mol

CAS-No. : 57454-67-8

Component: Cobalt(II) carbonate hydrate

Classification: Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2A; Skin Sens. 1; Carc. 2;

STOT SE 3; H302, H315, H317, H319, H335, H351

Concentration: < 100%

SECTION 4. FIRST AID MEASURES

General advice:

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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:

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed:

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

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

Indication of any immediate medical attention and special treatment needed:

No data available

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

Special hazards arising from the substance or mixture:

Cobalt/cobalt oxides

Advice for firefighters:

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas.

Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combu formation should be taken into consideration before additional processing. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a dry and well-ventilated place.

Air sensitive. Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Appropriate 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.

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:

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US)

or CEN (EU).

Control of environmental exposure:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: powder

Odour: No data available

Odour: Threshold No data available

pH: No data available

Melting point/freezing point: No data available

Initial boiling point and boiling range: No data available

Flash point: No data available

Evaporation rate: No data available

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits: No data available

Vapour pressure: No data available

Vapour density: No data available

Relative density 4.13 g/cm³ at 25 °C (77 °F)

Water solubility: No data available

Partition coefficient: noctanol/water: No data available

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

SECTION 10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: No data available

Conditions to avoid: Air sensitive.

Incompatible materials: Oxidizing agents Strong oxidizing agents

Hazardous decomposition products:

Hazardous decomposition products formed under fire conditions. - Cobalt/cobalt oxides

Other decomposition products - No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity:

No data available Cobalt(II) carbonate hydrate

Inhalation: No data available (Cobalt(II) carbonate hydrate)

Dermal: No data available (Cobalt(II) carbonate hydrate)

No data available (Cobalt(II) carbonate hydrate)

Skin corrosion/irritation:

No data available (Cobalt(II) carbonate hydrate)

Serious eye damage/eye irritation:

No data available (Cobalt(II) carbonate hydrate)

Respiratory or skin sensitisation:

Germ cell mutagenicity

No data available (Cobalt(II) carbonate hydrate)

Carcinogenicity:

Limited evidence of carcinogenicity in animal studies (Cobalt(II) carbonate hydrate)

(Cobalt(II) carbonate hydrate)

(Cobalt(II) carbonate hydrate)

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a

carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as

a

carcinogen or potential carcinogen by OSHA.

Reproductive toxicity:

No data available(Cobalt(II) carbonate hydrate)

No data available(Cobalt(II) carbonate hydrate)

Specific target organ toxicity - single exposure:

Inhalation - May cause respiratory irritation.(Cobalt(II) carbonate hydrate)

Specific target organ toxicity - repeated exposure:

No data available

Aspiration hazard:

No data available(Cobalt(II) carbonate hydrate)

SECTION 12. ECOLOGICAL INFORMATION

Toxicity:

No data available

Persistence and degradability:

No data available

Bioaccumulative potential:

No data available

Mobility in soil:

No data available(Cobalt(II) carbonate hydrate)

Results of PBT and vPvB assessment:

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

SECTION 13. DISPOSAL CONSIDERATIONS

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed

professional waste disposal service to dispose of this material. Dissolve or mix the material with a

combustible solvent and burn in a chem scrubber.

Contaminated packaging:

Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT (US):

Not dangerous goods

IMDG:

Not dangerous goods

IATA:

Not dangerous goods

SECTION 15. REGULATORY INFORMATION

SARA 302 Components:

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards:

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components:

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components:

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New Jersey Right To Know Components:

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California Prop. 65 Components:

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). 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.