

MATERIAL SAFETY DATA SHEET**Product Name:** Cobalt sulphate heptahydrate**CAS No.:** 10026-24-1**Version:** 0**1. Identification**

Product Code : 90377
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2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
COBALT SULPHATE HEPTAHYDRATE	10026-24-1	90-100%

3. Hazards Identification

Emergency Overview : WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC SKIN OR RESPIRATORY REACTION. CHRONIC EXPOSURE MAY AFFECT THYROID, LUNGS, HEART, AND KIDNEYS.

Saf-T-Data

Health Rating : 3 - Severe (Cancer Causing)
Flammability Rating : 0 - None
Reactivity Rating : 0 - None
Contact Rating : 3 - Severe (Life)

Potential Health Effects

Inhalation : Causes irritation to the respiratory tract, symptoms may include coughing; shortness of breath, and nausea. Respiratory hypersensitivity, asthma may appear. Inhalation of cobalt dust and fumes is associated with an increased incidence of lung disease.

Ingestion : Toxic. Causes abdominal pain, nausea, vomiting, flushing of the face and ears, mild hypotension, rash, and ringing in the ears. May have cumulative toxic action where elimination cannot keep pace with absorption. Large amounts depress erythrocyte production

Skin Contact : Causes irritation to skin. Symptoms include redness, itching, and pain. May cause dermatitis.

Eye Contact : Causes irritation, redness, and pain.

Chronic Exposure : Repeated oral administration may produce goiter and reduced thyroid activity. Prolonged or repeated skin exposure may cause dermatitis. Chronic exposure associated with kidney, heart and lung

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Aggravation of Pre-existing Conditions : damage.
: Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance. Persons with allergies or sensitivity to cobalt may also be more susceptible to the effects of the substance.

4. First Aid Measures

General information : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.

Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention

Ingestion : Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact : Wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire fighting measures

Fire : Contact with strong oxidizers may cause fire.

Explosion : Not considered to be an explosion hazard.

Fire Extinguishing Media : Use any means suitable for extinguishing surrounding fire.

Special Information : In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures : Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. Avoid inhalation of dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up : Sweep up and place in a clearly labeled container for chemical waste.

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- Notification Procedures** : Clean surface thoroughly to remove residual contamination. Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.
- Environmental precautions** : Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

- Precautions for safe handling** : Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Avoid inhalation of dust. Wash thoroughly after handling.
- Conditions for safe storage, including any incompatibilities** : Keep containers tightly closed. Store in cool, dry place. Store in a well-ventilated place.

8. Exposure Controls Personal Protection

Control parameters

Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
For Cobalt Compound	PEL	0.1 mg/m ³ (TWA) Cobalt metal dust and fume as Co	OSHA
For Cobalt Compound	TLV	0.02 mg/m ³ (TWA) as Co, A3: Animal carcinogen	ACGIH

- Ventilation System** : A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.
- Personal Respirators (NIOSH Approved)** : If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece Positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

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Skin Protection	:	Wear protective gloves and clean body-covering clothing.
Eye Protection	:	Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.
Other	:	Wear suitable protective clothing.
Respiratory protection	:	In case of inadequate ventilation use suitable respirator.
Hygiene measures	:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower.

9. Physical and Chemical Properties

Appearance	:	Large irregular dark red transparent crystals.
Odor	:	Odorless.
pH	:	No information found
Melting point/freezing point	:	96.8C (207F) Loses water @ 420C (788F)
Initial boiling point and boiling range	:	735C (1355F)
Flash Point	:	No information found.
Vapor pressure	:	No information found.
Vapor density	:	No information found.
Relative density	:	2.03 @ 25C/4C
Solubility in water	:	60.4g/100g water @ 3C (37F).
Solubility (other)	:	No data available.
Formula	:	CoSO ₄ .7H ₂ O
Molecular Weight	:	281.10 g/mol

10. Stability and Reactivity

Stability	:	Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products	:	Oxides of sulfur and the contained metal.
Hazardous Polymerization	:	Will not occur
Incompatibilities:	:	Strong oxidizers, tert-butyl hydroperoxide.
Conditions to Avoid:	:	Incompatibles.

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- Ingestion** : May cause irritation of the gastrointestinal tract.
Inhalation : May cause irritation to the respiratory system.
Skin contact : May cause irritation.
Eye contact : May cause temporary eye irritation.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

- Oral Product** : Oral rat LD50: 424 mg/kg
Dermal Product : No data available.
Inhalation Product : No data available.
Repeated dose toxicity Product : No data available.
Skin corrosion/irritation Product : May cause skin irritation.
Serious eye damage/eye irritation Product : May irritate eyes.
Respiratory or skin sensitization Product : Not a skin sensitizer.
Carcinogenicity Product : This substance has evidence of carcinogenic properties.
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans DIOXANE : Cobalt and its compounds have been shown to cause cancer in laboratory animals.
US. National Toxicology Program (NTP) Report on Carcinogens DIOXANE : No carcinogenic components identified.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) : No carcinogenic components identified.
Germ cell mutagenicity
In vitro Product : Mutagenic components identified.
In vivo Product : Mutagenic components identified.
Reproductive toxicity Product : No components toxic to reproduction.
Specific target organ toxicity - single exposure Product : No data available.
Specific target organ toxicity - repeated exposure Product : No data available.
Aspiration hazard Product : Not classified.
Other effects : None known.

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12. Ecological Information

Ecotoxicity

Acute hazards to the aquatic environment :

Fish Product : No data available.

Aquatic invertebrates Product : No data available.

Chronic hazards to the aquatic environment :

Fish Product : No data available.

Aquatic invertebrates Product : No data available.

Toxicity to Aquatic Plants Product: : No data available.

Persistence and degradability

Biodegradation Product : There are no data on the degradability of this product.

BOD/COD ratio Product : No data available.

Bioaccumulative potential

Bioconcentration factor (BCF) Product : No data available on bioaccumulation.

Product

Partition coefficient n-octanol / water (log Kow) Product : No data available.

Mobility in soil : No data available.

Other adverse effects : No data available.

13. Disposal consideration

Disposal instructions : Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated packaging : Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	UN3077	COBALT SULPHATE HEPTAHYDRATE	9	III	No
IMDG	UN3077	COBALT SULPHATE HEPTAHYDRATE	9	III	No
IATA	UN3077	COBALT SULPHATE HEPTAHYDRATE	9	III	No

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This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

16. Other Information**Issue Date :**01/08/2014**Version : 0**

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