

MSDS-FOR Cobalt Sulfate

1. Product Identification

Synonyms :Cobalt (II) sulfate heptahydrate; sulfuric acid, cobalt (2+) salt heptahydrate; cobalt monosulfate heptahydrate; cobaltous sulfate
CAS No : 10124-43-3 (Anhydrous) 10026-24-1 (heptahydrate)
Molecular Weight : 281.10
Chemical Formula : $\text{CoSO}_4 \cdot 7\text{H}_2\text{O}$

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Co	10124-43-3	21%	Yes

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.

OMKAR SPECIALITY CHEMICALS PVT. LTD. Ratings (Provided here for your convenience

Health Rating:	2 - Moderate
Flammability Rating :	0 - None
Reactivity Rating :	1 - Slight
Contact Rating :	1 - Slight
Lab Protective Equip :	GOGGLES; LAB COAT
Storage Color Code :	Orange (General Storage)

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 damage.

Aggravation of Pre-existing Conditions: 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

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 face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. Toxic to Fish. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Wash hands before eating and do not eat, drink, or smoke in workplace. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. 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, a half-face high efficiency dust/mist respirator 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 high efficiency dust/mist respirator 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. 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.

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.

9. Physical and Chemical Properties

Appearance :	Large irregular dark red transparent crystals
Odor :	Odorless
Solubility :	60.4g/100g water @ 3C (37F)
Density :	2.03 @ 25C/4C
.Ph :	No information found
% Volatiles by volume @ 21C (70F) :	0
Boiling Point :	735C (1355F)
Melting Point :	96.8C (207F) Loses water @ 420C (788F)
Vapor Density (Air=1) :	No information found
Vapor Pressure (mm Hg) :	No information found
Evaporation Rate (BuAc=1) :	No information found

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.

11. Toxicological Information

Toxicological Data : Oral rat LD50: 424 mg/kg. Investigated as a tumorigen and mutagen.

Carcinogenicity : Cobalt and its compounds have been shown to cause cancer in



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12. Ecological Information

Environmental Fate : No information found.
Environmental Toxicity : No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

Chemical Inventory Status - Part 1

Ingredient	TSCA	EC	Japan	Australia
Cobaltous Sulfate (10124-43-3)	Yes	Yes	Yes	Yes

Chemical Inventory Status - Part 2

Chemical Weapons Convention: No TSCA 12(b) No CDTA: No

SARA 311/312: Acute: Yes Chronic: Yes Fire: No

Pressure: No

Reactivity: No (Mixture / Solid)

WARNING:

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

Australian Hazchem Code : No information found.

Poison Schedule : No information found.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.



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16. Other Information

THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONS FOR THE HANDLING OF MATERIAL BY A PERSON TRAINED IN CHEMICAL HANDLING. THE USER IS RESPONSIBLE FOR DETERMINING THE PRECAUTIONS & DANGERS OF THIS CHEMICAL FOR HIS OR HER PARTICULAR APPLICATION DEPENDING ON USAGE. ADEQUATE PROTECTIVE CLOTHING, INCLUDING EYE / FACE GUARDS, APPROVED RESPIRATORY PROTECTIVE EQUIPMENT MUST BE USED TO AVOID CONTACT WITH THE MATERIAL OR BREATHING CHEMICAL VAPOURS / FUMES.

EXPOSURE TO THIS PRODUCT MAY CAUSE ADVERSE HEALTH EFFECTS. THIS CHEMICAL MAY INTERACT WITH OTHER SUBSTANCES. SINCE THE POTENTIAL USES ARE SO VARIED, M/S. OMKAR SPECIALITY CHEMICALS LTD. CANNOT WARN OF ALL OF THE POTENTIAL DANGERS OF USE OR INTERACTION WITH CHEMICALS OF MATERIALS. M/S. OMKAR SPECIALITY CHEMICALS LTD. WARRANTS THAT, THE CHEMICAL MEETS THE SPECIFICATIONS SET FORTH ON THE TEST REPORT.

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READ ALL PRECAUTIONARY INFORMATIONS