

Material Safety Data Sheet

Version 3.0
Revision Date 12/27/2008
Print Date 04/07/2010

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Cobalt(II) nitrate hexahydrate

Product Number : 60832
Brand : Sigma-Aldrich

Company : Sigma-Aldrich Canada, Ltd
2149 Winston Park Drive
OAKVILLE ON L6H 6J8
CANADA

Telephone : +19058299500
Fax : +19058299292
Emergency Phone # : 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Cobaltous nitratehexahydrate

Formula : $\text{CoN}_2\text{O}_6 \cdot 6\text{H}_2\text{O}$
Molecular Weight : 291.03 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Cobaltous nitrate, hexahydrate			
10026-22-9	-	-	-

3. HAZARDS IDENTIFICATION**Emergency Overview****Target Organs**

Lungs, Thyroid.

WHMIS Classification

C Oxidizing Material
D1B
D2A
D2B

Oxidizer
Toxic by ingestion
Carcinogen
Skin sensitizer

HMIS Classification

Health Hazard: 2
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 2

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Skin
Eyes
Ingestion

May be harmful if absorbed through skin. May cause skin irritation.
May cause eye irritation.
Toxic if swallowed.

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.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point not applicable

Ignition temperature no data available

Suitable extinguishing media

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

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods for cleaning up

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

7. HANDLING AND STORAGE

Handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from combustible material.

Storage

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Cobaltous nitrate, hexahydrate	10026-22-9	TWA	0.05 mg/m3	2004-04-30	Canada. Occupational Health and Safety Code 218
		TWA	0.02 mg/m3	2000-01-12	Canada. Act Respecting Occupational Health and Safety [R.S.Q., c.2.1], Regulation respecting Occupational Health and Safety (O.C.885-2001), Division XV, Sections 130-14
Remarks	Carcinogenic effect detected in animals. Results of studies relating to the carcinogenicity of these substances in animals are not necessarily applicable to humans.				
		TWA	0.02 mg/m3	2004-08-01	Canada. Worker's Compensation Act, Occupational Health and Safety Regulations (BC Reg 296/97 as amended), 7.2 [B.C. Reg. 382/2004, s.1]
	IARC notation 2B, indicates substance designated as carcinogen under section 5.57(1) of the OHS Regulation.				

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	crystalline
Colour	red

Safety data

pH	4.0 at 100 g/l at 20 °C (68 °F)
Melting point	55 °C (131 °F)
Boiling point	no data available
Flash point	not applicable
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	1.88 g/cm ³
Water solubility	soluble

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Heat. Exposure to moisture.

Materials to avoid

Organic materials, Reducing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NO_x)

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD₅₀ Oral - rat - 691 mg/kg

LD₅₀ Oral - rat - 434 mg/kg

Remarks: anhydrous

Irritation and corrosion

no data available

Sensitisation

May cause allergic skin reaction.

Chronic exposure

Carcinogenicity - rabbit

Tumorigenic: Tumors at site or application.

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.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.
Ingestion	Toxic if swallowed.
Target Organs	Lungs, Thyroid.,

Additional Information

RTECS: QU7355500

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

no data available

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. 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 chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 1477 Class: 5.1 Packing group: II
Proper shipping name: Nitrates, inorganic, n.o.s.
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

UN-Number: 1477 Class: 5.1 Packing group: II EMS-No: F-A, S-Q
Proper shipping name: NITRATES, INORGANIC, N.O.S.
Marine pollutant: No

IATA

UN-Number: 1477 Class: 5.1 Packing group: II
Proper shipping name: Nitrates, inorganic n.o.s.

15. REGULATORY INFORMATION

DSL Status

This product contains the following components that are not on the Canadian DSL nor NDSL lists.

Cobaltous nitrate, hexahydrate

CAS-No.
10026-22-9

WHMIS Classification

C Oxidizing Material

D1B

D2A

D2B

Oxidizer

Toxic by ingestion

Carcinogen

Skin sensitizer

16. OTHER INFORMATION**Further information**

Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.