

## SAFETY DATA SHEET

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Product name	Cobalt nitrate hexahydrate
CAS number	10026-22-9
Synonyms	Cobaltous nitrate hexahydrate

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory chemicals
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#### 1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

#### 1.4 Emergency telephone

<b>Emergency Phone #</b>	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC


### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Oxidizing solids	Category 2
Acute oral toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Serious Eye Damage/Eye Irritation	Category 1
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 1B

## 2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	May intensify fire; oxidizer. May cause an allergic skin reaction. May damage fertility. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing genetic defects. May cause cancer by inhalation. Harmful if swallowed or if inhaled.
Precautionary statements	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust/fumes/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep/store away from clothing/ other combustible materials. Take any precaution to avoid mixing with combustibles.
Response	IF exposed or concerned: Get medical attention/advice.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
Skin	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eyes	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Ingestion	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
Fire	In case of fire: Use CO <sub>2</sub> , dry chemical, or foam for extinction.
Storage	Store locked up.
Disposal	Dispose of contents/container to an approved waste disposal plant.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Very toxic to aquatic life with long lasting effects.

### SECTION 3: Composition/information on ingredients

#### 3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Cobalt nitrate hexahydrate	Cobaltous nitrate hexahydrate	10026-22-9	>95%
Cobalt nitrate	-	10141-05-6	-

### SECTION 4: First aid measures

#### 4.1 Description of first-aid measures

##### General advice

<b>If inhaled</b>	Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
<b>In case of skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
<b>In case of eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
<b>If swallowed</b>	Do NOT induce vomiting. Call a physician or poison control center immediately.

#### 4.2 Most important symptoms and effects, both acute and delayed

Causes eye burns. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Causes severe eye damaging. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

#### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	Water spray, carbon dioxide (CO <sub>2</sub> ), dry chemical, alcohol-resistant foam.
<b>Unsuitable extinguishing media</b>	No information available.

**5.2 Specific hazards arising from the substance or mixture**

Oxidizer: Contact with combustible/organic material may cause fire. Do not allow run-off from fire-fighting to enter drains of water courses. May ignite combustibles (wood paper, oil, clothing, etc). Hazardous Combustion Products: Nitrogen oxides, cobalt oxides.

**5.3 Special protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**5.4 Further information**

**Flash Point** No information available.

**Autoignition Temperature** No information available

**Explosion limits**

<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

**NFPA**

Health	Flammability	Instability	Physical hazards
3	1	1	OX

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

**6.2 Environmental precautions**

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment.

**6.3 Methods and materials for containment and cleaning up**

Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal

**6.4 Reference to other sections**

See section 2 for full list of hazard and precaution statements.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Precautions on safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance. Keep away from clothing and other combustible materials.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Incompatible materials.

#### Incompatibilities

Strong oxidizing agents, strong reducing agents, combustible material.

## SECTION 8: Exposure controls/personal protection

### 8.1 Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

No information available

#### US. ACGIH Threshold Limit Values

Component	Type	Value
Cobalt nitrate hexahydrate	TWA	0.02 mg/m <sup>3</sup>
	TWA	0.02 mg/m <sup>3</sup>

#### US. NIOSH: Pocket Guide to Chemical Hazards

No information available

#### Biological occupational exposure limits

No information available

### 8.2 Exposure controls

#### Appropriate engineering controls

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

#### Personal protective equipment

**Eye/face protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Control of environmental exposure**

No information available.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Physical State	Solid
Appearance	Red brown
Odor	No information available
Odor Threshold	No information available
pH	No information available
Melting Point/Range	55 - 56 °C / 131 - 132.8 °F
Boiling Point/Range	No information available
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Density	No information available
Solubility	134 g/100 ml
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	CoN2O6 . 6 H2O
Molecular Weight	291.02
VOC Content(%)	No information available
Oxidizing properties	No information available

**9.2 Other safety information**

No information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Yes.

### 10.2 Chemical stability

Hygroscopic. Oxidizer: Contact with combustible/organic material may cause fire.

### 10.3 Possibility of hazardous reactions

None under normal processing.

### 10.4 Conditions to avoid

Incompatible products. Excess heat. Avoid dust formation. Exposure to moist air or water.  
Combustible materials.

### 10.5 Incompatible materials

Strong oxidizing agents, strong reducing agents, combustible material.

### 10.6 Hazardous decomposition products

Nitrogen oxides, cobalt oxides.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Product Information, Component Information

#### Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cobalt nitrate hexahydrate	691 mg/kg (rat)	-	-
Cobalt nitrate	434 mg/kg (rat)	-	-

#### Skin corrosion/irritation

No information available.

#### Serious eye damage/eye irritation

Causes eye burns.

#### Respiratory or skin sensitization

May cause sensitization by skin contact.

#### Germ cell mutagenicity

Mutagenic effects have occurred in experimental animals.

#### Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
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Cobalt nitrate hexhydrate	10026-22-9	Group 2B	Reasonably Anticipated	A3	X	Not listed
Cobalt nitrate	10141-05-6	Group 2B	Reasonably Anticipated	A3	X	Not listed

**Specific target organ toxicity - single exposure**

None known.

**Specific target organ toxicity - repeated exposure**

None known.

**Reproductive toxicity**

Possible risk of impaired fertility

**Chronic effects**

No information available.

**11.2 Additional Information**

No information available.

**SECTION 12: Ecological information**

**12.1 Toxicity**

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organism, may cause long-term adverse effects in the aquatic environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

**12.2 Persistence and degradability**

Based on information. May persist.

**12.3 Bio accumulative potential**

No information available.

**12.4 Mobility in soil**

Will likely be mobile in the environment due to it water solubility.

**12.5 Results of PBT and vPvB assessment**

No information available.

**12.6 Endocrine disrupting properties**

No information available.

**12.7 Other adverse effects**

The toxicological properties have not been fully investigated.

**SECTION 13: Disposal considerations**



## 13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### SECTION 14: Transport information

#### DOT (US)

UN-No	UN1477
Proper Shipping Name	NITRATES, INORGANIC, N.O.S.
Hazard Class	5.1
Packing Group	II

#### IMDG

UN-No	UN1477
Proper Shipping Name	NITRATES, INORGANIC, N.O.S.
Hazard Class	5.1
Packing Group	II

#### IATA

UN-No	UN1477
Proper Shipping Name	NITRATES, INORGANIC, N.O.S.
Hazard Class	5.1
Packing Group	II

### SECTION 15: Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not listed.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not listed.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous**

See section 2 for more information.

**SARA 313 (TRI reporting)**

Listed (COBALT NITRATE HEXAHYDRATE) Weight: >95%, Threshold Values %: 0.1-1.0  
Listed (COBALT NITRATE) Threshold Values %: 0.1

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Listed (COBALT NITRATE HEXAHYDRATE)  
Listed (COBALT NITRATE)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act**

Not regulated

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

Not listed

**US state regulations**

**US. Massachusetts RTK - Substance List**

Not listed  
Listed (COBALT NITRATE)

**US. New Jersey Worker and Community Right-to-Know Act**

Listed (COBALT NITRATE HEXAHYDRATE)  
Listed (COBALT NITRATE)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Listed (COBALT NITRATE HEXAHYDRATE)  
Listed (COBALT NITRATE)

**California Proposition 65**

Not listed

**SECTION 16: Other information**

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Revision: 0

**SECTION 17: Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.