

# SAFETY DATA SHEET



PRINCE AGRI PRODUCTS, INC.

Advancing Nutrition for Healthy Animals®

## Cobalt Sulfate Monohydrate

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### GHS Product Information

**Product Name:** Cobalt Sulfate Monohydrate  
**Business Unit** Prince Agri  
**Other means of identification:** Not available  
  
**Safety data sheet number:** 5005-500 -US-E

#### Recommended use of the chemical and restrictions on use

**Recommended use:** Animal Feed Supplement.  
  
**Uses advised against:** No information available

#### Details of the supplier of the safety data sheet

<b>Supplier:</b> Prince Agri Products, Inc 229 Radio Road Quincy, IL 62305 Tel: 217-222-8854 Fax: 217-222-5098 Toll Free: 800-677-4623 Email: prince@princeagri.com	<b>Manufacturer:</b> Prince Agri Products, Inc 229 Radio Road Quincy, IL 62305 Tel: 217-222-8854 Fax: 217-222-5098 Toll Free: 800-677-4623 Email: prince@princeagri.com
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**SDS Contact (email of responsible person):** prince@princeagri.com

**24 Hour Emergency Phone Number:** Chemtrec 1-800-424-9300 (CCN17224)

**International:** +1 703-527-3887

### 2. HAZARDS IDENTIFICATION

#### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 1A
Reproductive toxicity	Category 1A
Specific target organ toxicity (single exposure)	Category 2 - (H371)
Specific target organ toxicity (repeated exposure)	Category 1

**Label elements**

**Emergency Overview**

**Danger**

**Hazard statements**

Harmful if swallowed  
May cause allergy or asthma symptoms or breathing difficulties if inhaled  
May cause an allergic skin reaction  
Suspected of causing genetic defects  
May cause cancer  
May damage fertility or the unborn child  
May cause damage to organs  
Causes damage to organs through prolonged or repeated exposure



**Appearance** powder

**Physical state** Solid

**Odor** No information available

**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  
In case of inadequate ventilation wear respiratory protection  
Contaminated work clothing should not be allowed out of the workplace  
Wear protective gloves  
Do not breathe dust/fume/gas/mist/vapors/spray

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention  
Specific treatment  
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  
IF INHALED: If breathing is difficult, 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  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

**Other Information**

**Interactions with Other Chemicals** Irritants Sensitizers Epoxies

**Other hazards**

- Very toxic to aquatic life with long lasting effects
- Very toxic to aquatic life

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture                      Mixture

Chemical Name	CAS No	Weight-%	Trade Secret
Cobalt sulfate	10124-43-3	60 - 100	*
Nickel Sulfate	7786-81-4	1 - 5	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**First aid measures**

- General advice:** Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes.
- Eye contact:** In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Inhalation:** Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Administer oxygen if breathing is difficult.
- Skin Contact:** Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash off immediately with soap and plenty of water. Consult a physician if necessary.
- Ingestion:** Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.
- Self-protection of the first aider:** Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**Most important symptoms and effects, both acute and delayed**

**Symptoms:** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians:** May cause sensitization of susceptible persons.

### 5. FIRE-FIGHTING MEASURES

**Extinguishing media**

**Suitable extinguishing media:** Dry chemical, CO<sub>2</sub>, water spray or regular foam. Water spray, fog or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal.

**Unsuitable extinguishing media:** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical:** Some may burn but none ignite readily. Those substances designated with a "P" may polymerize explosively when heated or involved in a fire. Some may be transported hot.

**Explosion data**

**Sensitivity to Mechanical Impact:** None.

**Sensitivity to Static Discharge:** None.

**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.

**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

**Personal precautions:** Do not touch or walk through spilled material. Stop leak if you can do it without risk.

**For emergency responders:** Use personal protection recommended in Section 8. Use personal protective equipment as required.

**Environmental precautions:** Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

**Methods for containment:** Prevent dust cloud.

**Methods for cleaning up:** With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. Take up with sand or other non-combustible absorbent material and place into containers for later disposal. Cover liquid spill with sand, earth or other non-combustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading.

**7. HANDLING AND STORAGE**

Precautions for safe handling

**Advice on safe handling:** Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

**Storage Conditions:** Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place.

**Incompatible materials:** None known based on information supplied.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control parameters

**Exposure Guidelines**

Chemical Name	CAS No	ACGIH TLV	OSHA PEL	NIOSH IDLH
Cobalt sulfate	10124-43-3	TWA: 0.02 mg/m <sup>3</sup> Co	-	-
Nickel Sulfate	7786-81-4	TWA: 0.1 mg/m <sup>3</sup> Ni inhalable fraction	TWA: 1 mg/m <sup>3</sup> Ni (vacated) TWA: 0.1 mg/m <sup>3</sup> Ni	IDLH: 10 mg/m <sup>3</sup> Ni TWA: 0.015 mg/m <sup>3</sup> except Nickel carbonyl Ni

*NIOSH IDLH Immediately Dangerous to Life or Health*

**Other Information:** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Appropriate engineering controls**

**Engineering Controls:** Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**General Hygiene Considerations:** When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

**Eye/face protection:** Tight sealing safety goggles.

**Skin and body protection:** No special technical protective measures are necessary.

**Respiratory protection:** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical state</b>	Solid	<b>Odor</b>	No information available
<b>Appearance</b>	powder	<b>Odor threshold</b>	No information available
<b>Color</b>	pink		

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>	No information available	
<b>Melting Point / Freezing Point</b>	No information available	
<b>Boiling point / boiling range</b>	No information available	
<b>Flash point</b>	No information available	
<b>Evaporation rate</b>	No information available	
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit:</b>	No information available	
<b>Lower flammability limit:</b>	No information available	
<b>Vapor pressure</b>	No information available	
<b>Vapor density</b>	No information available	
<b>Specific Gravity</b>	1.04	
<b>Water solubility</b>	No information available	
<b>Solubility in other solvents</b>	No information available	
<b>Partition coefficient</b>	No information available	
<b>Autoignition temperature</b>	No information available	
<b>Decomposition temperature</b>	No information available	
<b>Kinematic viscosity</b>	No information available	
<b>Dynamic viscosity</b>	No information available	
<b>Explosive properties</b>	No information available	
<b>Oxidizing properties</b>	No information available	

**Other Information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	No information available

Percent Volatile No information available

## 10. STABILITY AND REACTIVITY

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

Extremes of temperature and direct sunlight.

### Incompatible materials

None known based on information supplied.

### Hazardous Decomposition Products

None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

Product Information: No data available

Inhalation: No data available.

Eye contact: No data available.

Skin Contact: No data available.

Ingestion: No data available.

Chemical Name	CAS No	Oral LD50	Dermal LD50	Inhalation LC50
Cobalt sulfate	10124-43-3	= 424 mg/kg ( Rat )	-	-
Nickel Sulfate	7786-81-4	= 275 mg/kg ( Rat )	-	-

### Information on toxicological effects

Symptoms: No information available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: No information available.

Germ cell mutagenicity: No information available.

Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	CAS No	ACGIH	IARC	NTP	OSHA
Cobalt sulfate	10124-43-3	A3	Group 2B	Reasonably Anticipated	X
Nickel Sulfate	7786-81-4	-	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

**Reproductive toxicity:** No information available.  
**STOT - single exposure:** No information available.  
**STOT - repeated exposure:** No information available.  
**Chronic toxicity:** Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.  
**Target Organ Effects:** lungs, Nasal Cavities, Skin.  
**Aspiration hazard:** No information available.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document . mg/kg mg/l 423

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Very toxic to aquatic life with long lasting effects

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	CAS No	Algae/aquatic plants	Fish	Crustacea
Cobalt sulfate	10124-43-3	0.4 - 72: 72 h Pseudokirchneriella subcapitata mg/L EC50	-	-
Nickel Sulfate	7786-81-4	0.75: 72 h Pseudokirchneriella subcapitata mg/L EC50	2.594 - 3.279: 96 h Pimephales promelas mg/L LC50 flow-through 5.79 - 6.54: 96 h Cyprinus carpio mg/L LC50 semi-static 1.28: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 32.36 - 41.04: 96 h Poecilia reticulata mg/L LC50 semi-static 47.58: 96 h Cyprinus carpio mg/L LC50 static 8.6 - 13.6: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	1: 48 h Daphnia magna mg/L EC50

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Mobility**

No information available.

**Other adverse effects:**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Disposal of wastes:** Refer to all federal, state and local regulations prior to disposal of container and unused contents by reuse, recycle or disposal. Disposal should be in accordance with applicable regional, national and local laws and regulations. Avoid runoff to waterways and sewers. Recover or recycle if possible. Send to a licensed recycler, reclaimer or incinerator.

**Disposal methods:** Do not reuse container.

## 14. TRANSPORT INFORMATION

**Note:** Store in a closed container. Keep container upright.

### DOT

**UN/ID no** UN3077  
**Proper shipping name** Environmentally hazardous substance, solid, n.o.s. ( Cobalt sulfate, Nickel Sulfate )  
**Hazard Class** 9  
**Packing Group** III  
**Special Provisions** 146, 335, A112, B54, B120, IB8, IP3, N20, T1, TP33, 8  
**Description** UN3077, Environmentally hazardous substance, solid, n.o.s. (Cobalt sulfate, Nickel Sulfate), 9, III  
**Emergency Response Guide Number** 171

### IATA

**UN/ID no** UN3077  
**Proper shipping name** Environmentally hazardous substance, solid, n.o.s. ( Cobalt sulfate, Nickel Sulfate )  
**Hazard Class** 9  
**Packing Group** III  
**ERG Code** 9L  
**Special Provisions** A158, A179, A97  
**Description** UN3077, Environmentally hazardous substance, solid, n.o.s. (Cobalt sulfate, Nickel Sulfate), 9, III

### IMDG

**UN/ID no** UN3077  
**Proper shipping name** Environmentally hazardous substance, solid, n.o.s. ( Cobalt sulfate, Nickel Sulfate )  
**Hazard Class** 9  
**Packing Group** III  
**EmS-No** F-A, S-F  
**Special Provisions** 274, 335, 966, 967  
**Description** UN3077, Environmentally hazardous substance, solid, n.o.s. (Cobalt sulfate, Nickel Sulfate), 9, III

### TDG

**UN/ID no** UN3077  
**Proper shipping name** Environmentally hazardous substance, solid, n.o.s. Cobalt sulfate, Nickel Sulfate Cobalt sulfate, Sulfuric acid, nickel(2+) salt (1:1)  
**Hazard Class** 9  
**Packing Group** III  
**Description** UN3077, Environmentally hazardous substance, solid, n.o.s. (Cobalt sulfate, Nickel Sulfate), 9, III

## 15. REGULATORY INFORMATION

### International Inventories

**TSCA:** Complies  
**DSL/NDSL:** Complies  
**EINECS/ELINCS:** Complies

# This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

**Cobalt Sulfate Monohydrate**

**Revision Date** 03/23/2015

**ENCS:** Complies  
**IECSC:** Complies  
**KECL:** Complies  
**PICCS:** Complies  
**AICS:** Complies

## Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

## US Federal Regulations

### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	SARA 313 - Threshold Values %
Cobalt sulfate	10124-43-3	0.1
Nickel Sulfate	7786-81-4	0.1

### SARA 311/312 Hazard Categories

**Acute health hazard** Yes  
**Chronic Health Hazard** Yes  
**Fire hazard** No  
**Sudden release of pressure hazard** No  
**Reactive Hazard** No

### CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CAS No	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Nickel Sulfate	7786-81-4	100 lb	X	-	X

### CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	CAS No	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Nickel Sulfate	7786-81-4	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ

## US State Regulations

### California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	CAS No	California Proposition 65
Cobalt sulfate	10124-43-3	Carcinogen
Nickel Sulfate	7786-81-4	Carcinogen

**U.S. State Right-to-Know Regulations**

No information available

Chemical Name	CAS No	New Jersey	Massachusetts	Pennsylvania
Cobalt sulfate	10124-43-3	X	-	X
Nickel Sulfate	7786-81-4	X	X	X

**Canada**

No information available

WHMIS Hazard Class D2A - Very toxic materials



**16. OTHER INFORMATION**

<u>NFPA</u>	Health hazards 2	Flammability 0	Instability 0	Physical & Chemical Properties 0
<u>HMIS</u>	Health hazards *2	Flammability 0	Physical hazards 0	Personal protection E

Document Review

Revision Number: 2

Revision Note: No information available

**Key or legend to abbreviations and acronyms used in the safety data sheet:**  
 Bioconcentration factor (BCF)  
 International Air Transport Association (IATA)  
 Globally Harmonized System (GHS)  
 International Maritime Dangerous Goods (IMDG)

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**End of Safety Data Sheet**