

CATALYTIC INNOVATIONS



SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

Product Name: *Cobalt Nitrate Solution (14% Co)*

CAS #: 10141-05-6

Trade Names/Synonyms: Cobalt nitrate dinitrate, Cobalt Nitrate Aqueous Solution

EPA Reg. No.: Not applicable

Use of substance/mixture: For laboratory and manufacturing use only.

Restricted Use: Not for food, drug, or household use.

Manufacturer: Catalytic Innovations, LLC
10027 County Road 2020
Rolla, MO 65401

Emergency Contact Number: **573-578-1368**

SDS CREATION DATE: April 13th, 2023

SDS REVISION DATE: N/A

2. HAZARD IDENTIFICATION

GHS CLASSIFICATION: Respiratory sensitization (Category 1); Skin sensitization (Category 1); Germ cell mutagenicity (Category 2); Carcinogenicity (Category 1B); Reproductive toxicity (Category 1B); Hazardous to the aquatic environment - Acute Hazard (Category 2); Hazardous to the aquatic environment - Chronic Hazard (Category 2).

SIGNAL WORD: Warning!

HAZARD STATEMENTS:

H317: May cause an allergic skin reaction
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
H341: Suspected of causing genetic defects
H350: May cause cancer
H360: May damage fertility or the unborn child
H411: Toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS:

Prevention Measures:

P201: Obtain special instructions before use
P202: Do not handle until all safety precautions have been read and understood
P261: Avoid breathing mist, vapors, spray
P272: Contaminated work clothing should not be allowed out of the workplace
P273: Avoid release to the environment
P280: Wear protective gloves, eye protection
P284: Wear respiratory protection
P362+P364: Take off contaminated clothing and wash it before reuse
P391: Collect spillage



P405: Store locked up
P501: Dispose of contents/container to comply with local, state and federal regulations

Response Measures:

P302+P352: IF ON SKIN: Wash with plenty of soap and water
P308+P313: IF exposed or concerned: Get medical advice/attention
P333+P313: If skin irritation or rash occurs: Get medical advice/attention
P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

HEALTH COMMENTS: Read all precautions of products being handled and follow the most restrictive language for all products to provide the safest work environment.

COMMENTS: KEEP OUT OF REACH OF CHILDREN

3. COMPOSITION

<u>Chemical Ingredients:</u>	<u>Percentage by Weight</u>	<u>CAS No.</u>	<u>GHS-US</u>
Water	>8%	7732-18-5	Acute Tox. 4 (oral), H302 Resp. Sens. 1, H334 Muta. 2, H341 Carc. 1B, H350 Repr. 1B, H360 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Cobalt Nitrate	<95%	10141-05-6	

4. FIRST AID MEASURES

EYES: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first minutes then continue rinsing eyes. Call a poison control center or doctor for treatment advice if pain, blinking, or redness persists.

SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water and mild soap for 15-20 minutes followed by a rinse with warm water. Call a POISON CENTER or doctor for treatment advice.

INGESTION: Immediately call a poison control center or doctor. Rinse the mouth. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

INHALATION: Move person to fresh air. Allow the victim to rest. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

NOTES TO PHYSICIAN: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Symptoms: May cause allergy or asthma symptoms/difficulty breathing in inhaled. May cause an allergic skin reaction.

Chronic Symptoms: Suspected of causing genetic defects. May cause cancer. May damage fertility or the unborn child.

5. FIRE FIGHTING MEASURES

Flash Point (°F/Test Method): Data unavailable.
Flammable Limits (LFL & UFL): Not flammable.

Extinguishing Media: Foam. Dry powder. Carbon Dioxide. Water spray. Sand. **DO NOT** use heavy

water stream.

Specific Hazards Arising from Chemical: Oxidizer: contact with combustibles/organic material may cause fire. May ignite combustibles.

Hazardous Combustion Products: Nitrogen oxides. Cobalt oxides.

Precautionary Measures for Fire-Fighters: Exercise caution when fighting any chemical fire. Prevent fire-fighting water that may be contaminated by chemical from entering the environment. Do not enter without personal protective equipment, including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

Environmental Caution: Keep spills and cleaning runoff out of municipal sewers and open bodies of water. Notify the authorities if liquid enters the sewers or public waters.

7. HANDLING/STORAGE INFORMATION

Precautions for Safe Handling: Use in a well-ventilated area. Avoid eye and skin contact and do not breathe in dust, mist, or vapors. Use PPE (Personal Protective Equipment) as required. Do not handle until all safety precautions have been read and understood.

Precautions for Storage: Keep container tightly closed when in use. Do not store the product with highly reactive substances and strong reducing agents. Keep in a dry, cool, and well-ventilated place.

Other Comments: No information available.

Observe all federal, state and local regulations when storing this product. It is recommended that storage and transfers of this product be done on an impervious surface to prevent contamination of waterways.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Parameters:

Component: Cobalt Nitrate		
Agency	Parameters	Values
ACGIH	TLV (TWA)	0.02 MG/M3 as Co
OSHA	PEL (TWA)	0.1 as Co (metal dust and fume)
IDLH	US IDLH	20 mg/m3 as Co
NIOSH	REL (TWA)	0.05 mg/m3 (metal dust and fume)

Engineering Controls: Emergency eye wash fountains and showers should be made available in the immediate vicinity of the chemical or where exposure can occur. Ensure adequate ventilation.

Hygiene Measures: Wash hands and other exposed areas with mild soap and water before eating, drinking, smoking, or when leaving work. Wash contaminated clothing before re-use. Do not allow contaminated clothing out of the workplace.

Respiratory Protection: Avoid breathing dust or mist. Use NIOSH approved respiratory protection equipment when air borne exposure is excessive.

Skin/Body Protection: Wear chemically protective gloves. Wear chemically protective boots, aprons, and gauntlets to prevent prolonged or repeated contact with skin.

Eye/Face Protection: Wear safety goggles when handling this product. Use a face shield for additional protection. Contact lenses are not eye protective devices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: Rose to Red

Odor: None

pH: 2.0-4.0

Evaporation Rate: No data available.

Flammability: Non-flammable.

Melting Point: No data available.

Freezing Point: No data available.

Boiling Point: No data available.

Flash Point: Non-flammable.

Relative Density: No data available.

Water Solubility: Soluble in water.

Specific Gravity (water = 1.0):

Percent Volatile (by volume): No data available.

Vapor Pressure: No data available

Vapor Density: No data available

Viscosity: No data available.

Partition Coefficient: N-Octanol/Water : No data available.

10. STABILITY AND REACTIVITY

Reactivity: No information available

Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Sources of ignition. Direct sunlight. Extremely low or high temperatures.

Incompatible Materials: Strong bases. Strong reducing agents. Combustible materials.

Hazardous Decomposition Products: Nitrogen oxides. Cobalt and compounds .

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Skin or eye contact.

Acute Toxicity Effects:

Component: Cobalt Nitrate	
Test	Result
LD50 Oral Rat	691 mg/kg

Sensitization: No information available.

Eye Irritation: No information available.

Skin Irritation: No information available.

Respiratory Irritation: No information available.

Reproductive Toxicity: May cause damage to fertility or the unborn child.

Developmental Toxicity: No information available.

STOT Single Exposure: No information available.

STOT Repeated Exposure: No information available.

Carcinogenicity: See table below.

Component	CAS No.	IARC	NTP	ACGIH	OSHA
Cobalt Nitrate	1313-27-5	Group 2B	Anticipated	A3	Possible

Acute Symptoms: May cause allergy or asthma symptoms/breathing difficulty if inhaled. May cause an allergic skin reaction.

Chronic Effects: No information available.

12. ECOLOGICAL INFORMATION

Acute Aquatic Toxicity Effects: Toxic to aquatic life with long-lasting effects.

Persistence and Degradability: May cause long-term adverse effects in the environment.

Bioaccumulative Potential: Not established.

Do not contaminate water supplies. Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

Evaluation is required by the user at the time of disposal. In all cases, disposal should be in accordance with all local, state, and federal laws and regulations. For recycling options please contact product manufacturer.

14. TRANSPORTATION INFORMATION

DOT: Not Regulated under 49 CFR 172.101

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

Component: Cobalt Nitrate	
Statute	Status
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard) Reactive Hazard
SARA 313 (TRI Reporting)	YES
TSCA	YES

16. OTHER INFORMATION

Prepared by: ESH Department
SDS Preparation Date: April 13th, 2023
Last Revision Date: April 13th, 2023
Revision Summary: N/A



FOR ADDITIONAL NON-EMERGENCY INFORMATION CONTACT:

Catalytic Innovations, LLC

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Rolla, MO 65401
573-578-1368

Note: This SDS was prepared for and shall only be used for this product. The information and recommendations on this SDS are presented in good faith and based on data which is believed to be accurate. Catalytic Innovations, however, makes no guarantees or warranty, either expressed or implied, on the accuracy of this information. The conditions or methods of handling, storage, use, and disposal of this is beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, disposal of this product. If this product is used as a component of another product, the information contained in this SDS may no longer be applicable.

Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. This information relates to the specific product designated and may not be valid for such product used in combination with any other materials or in any other processes. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability, or completeness by Catalytic Innovations, LLC. It is the user's responsibility to satisfy themselves as to the suitability and completeness of such information for their own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement. Catalytic Innovations, LLC reserves the right to refuse shipment of this product to any consumer who fails to demonstrate the ability to consistently handle and use it safely and in compliance with all applicable laws, rules and regulations. Such demonstration may require on-site inspection of any or all storage, processing, packaging and other handling systems that come in contact with it. Customers are responsible for compliance with local, state and federal regulations that may be pertinent in the storage, application and disposal of this product.

Legend:

ACGIH (American Conference of Governmental Industrial Hygienists)

OSHA (Occupational Safety and Health Agency)

NIOSH (National Institute for Occupational Safety and Health)

IARC (International Agency for Research on Cancer)

TSCA (Toxic Substance Control Act)

SARA (Superfund Amendments and Reauthorization Act)

CFR (Code of Federal Regulations)

Dot (Department of Transportation)

CAS (Chemical Abstracts Service)

CWA (Clean Water Act)

CAA (Clean Air Act)