SECTION 1. IDENTIFICATION

**Product Name:** Cobalt Sulfate Solution

**Product Number:** All applicable American Elements product codes, e.g. CO-SAT-01-SOL.7HYD

**CAS #:** 10026-24-1

**Relevant identified uses of the substance:** Scientific research and development

**Supplier details:**
American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

**Emergency telephone number:**
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

**Classification**
- Acute oral toxicity: Category 4
- Respiratory Sensitization: Category 1
- Skin Sensitization: Category 1
- Germ Cell Mutagenicity: Category 2
- Carcinogenicity: Category 1B
- Reproductive Toxicity: Category 1B

**Label Elements**
**Signal Word:** Danger

**Hazard Statements:**
- Harmful if swallowed
- May cause an allergic skin reaction
- May cause allergy or asthma symptoms or breathing difficulties if inhaled
- Suspected of causing genetic defects
- May cause cancer by inhalation
- May damage fertility
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/fume/gas/mist/vapors/spray
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Response:
IF exposed or concerned: Get medical attention/advice
Inhalation
IF INHALED: If breathing is difficult, remove 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

Ingestion:
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Storage:
Store locked up

Disposal:
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Very toxic to aquatic life with long lasting effects
WARNING. Cancer - https://www.p65warnings.ca.gov/

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component: Cobalt Sulfate solution
CAS-No: 10026-24-1

SECTION 4. FIRST AID MEASURES

Eye Contact
Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Skin Contact
Wash off immediately with soap and plenty of water while removing all contaminated
clothes and shoes. Immediate medical attention is required.

Inhalation
Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. 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.

Ingestion
Clean mouth with water. Do not induce vomiting. Call a physician or Poison Control Center
immediately.

Most important symptoms and effects
May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause
allergic skin reaction. 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

Notes to Physician
Treat symptomatically

SECTION 5. FIREFIGHTING MEASURES

Suitable Extinguishing Media
Water spray. Carbon dioxide (CO 2). Dry chemical. Chemical foam.
Unsuitable Extinguishing Media No information available
Flash Point No information available
Method - No information available
Autoignition Temperature
Explosion Limits
Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available
Specific Hazards Arising from the Chemical
Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous Combustion Products
Sulfur oxides

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

NFPA
Health 2
Flammability

Instability 1
Physical hazards
N/A
SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Ensure adequate ventilation. Use personal protective equipment.

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.

Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

SECTION 7. HANDLING AND STORAGE

Handling
Do not breathe dust. Do not get in eyes, on skin, or on clothing. Use only in area provided with appropriate exhaust ventilation. Wash hands before breaks and immediately after handling the product.

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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
Component: Cobalt(II) sulfate heptahydrate
ACGIH TLV: TWA: 0.02 mg/m³
OSHA PEL
NIOSH IDLH
Mexico OEL (TWA)

Engineering Measures
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 EN 166.

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.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Appearance: Liquid
Odor: Not determined
Odor Threshold: Not determined
pH: Not determined
Melting Point/Range: Not determined
Boiling Point/Range: Not determined
Flash Point: Not determined
Evaporation Rate: Not determined
Flammability (solid, gas): Not determined
Flammability or explosive limits
Upper: Not determined
Lower: Not determined
Vapor Pressure: Not determined
Vapor Density: Not determined
Specific Gravity: Not determined
Solubility: Not determined
Partition coefficient; n-octanol/water: Not determined
Autoignition Temperature
Decomposition Temperature: Not determined
Viscosity: Not determined
Molecular Formula Co O4 S . 7 H2 O
Molecular Weight: Not determined

SECTION 10. STABILITY AND REACTIVITY

Reactive Hazard
None known, based on information available

Stability
Hygroscopic.

Conditions to Avoid
Incompatible products. Exposure to moist air or water.

Incompatible Materials
Strong oxidizing agents

Hazardous Decomposition Products
Sulfur oxides

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
None under normal processing
SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Component: Cobalt(II) sulfate heptahydrate
LD50 Oral: LD50 = 582 mg/kg ( Rat )
LD50 Dermal: Not listed
LC50 Inhalation: Not listed

Toxicologically Synergistic Products
No information available
Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation
May cause irritation

Sensitization
No information available

Carcinogenicity
Component: Cobalt sulfate
CAS-No: 10026-24-1
IARC: Group 2B
NTP: Reasonably Anticipated
ACGIH: A3
OSHA: X
Mexico: Not listed

Mutagenic Effects
Mutagenic effects have occurred in experimental animals.

Reproductive Effects
Experiments have shown reproductive toxicity effects on laboratory animals.

Developmental Effects
No information available.

Teratogenicity
No information available.

STOT - single exposure None known
STOT - repeated exposure None known

Aspiration hazard
No information available

Symptoms / effects, both acute and delayed
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

Endocrine Disruptor Information
No information available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component: Cobalt sulfate
Freshwater Algae: EC50: 0.4 - 72 mg/L, 72h (Pseudokirchneriella subcapitata)
Freshwater Fish
Microtox
Water Flea

Persistence and Degradability
Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation
No information available.

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

SECTION 13. DISPOSAL CONSIDERATIONS

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-Number: 3082 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substances, liquid, n.o.s. (Cobalt(II) sulfate)

Reportable Quantity (RQ): 400 lbs
Marine pollutant: Marine pollutant
Poison Inhalation Hazard: No

IMDG
UN-Number: 3082 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Cobalt(II) sulfate)
Marine pollutant: Marine pollutant

IATA
UN-Number: 3082 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Cobalt(II) sulfate)

SECTION 15. REGULATORY INFORMATION

International Inventories
Component: Cobalt sulfate
TSCA
DSL
NDSL
EINECS
ELINCS
NLP
PICCS: X
ENCS: X
AICS: X
IECSC: X
KECL

U.S. Federal Regulations
TSCA 12(b) Not applicable
SARA 313
Component: Cobalt sulfate
CAS-No: 10026-24-1

SARA 313 - Threshold Values: 0.1 %

SARA 311/312 Hazard Categories

CWA (Clean Water Act)
Not applicable

Clean Air Act
HAPS Data: X
Class 1 Ozone Depleters
Class 2 Ozone Depletor: -

OSHA: Not applicable

CERCLA: Not applicable

California Proposition 65
Component: Cobalt Sulfate
CAS-No: 10026-24-1
California Prop. 65: Carcinogen
Prop 65 NSRL -
Category: Carcinogen

U.S. State Right-to-Know Regulations
Massachusetts X
New Jersey X
Pennsylvania X
Illinois X
Rhode Island X

U.S. Department of Transportation
Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations
SECTION 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). 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. American Elements 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. COPYRIGHT 1997-2019 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.