

SECTION 1: Product and Company Identification

Identification of the substance or mixture

Product Name: Cobalt-NTA Agarose Resin
Catalog #: 10584, 10584-1

Company Identification

Cepharm Life Sciences Inc.
 11830 W Market Place, Suite K
 Fulton, MD 20759
 USA
 Toll Free: 1-800-257-1565
 Phone: 410-636-4954

24-hour Emergency Response for Hazardous Materials [or Dangerous Goods] Incident, Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Toll Free: 1-800-424-9300/ +1 703-527-3887 CCN 1010970

For Research Use Only. Not for use in diagnostic procedures.

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS-US classification

| | |
|--|---|
| Flammable liquids Category 4 | H227 Combustible liquid |
| Respiratory sensitization, Category 1 | H334 May cause an allergy or asthma symptoms or breathing difficulties if inhaled |
| Skin sensitization, Category 1 | H317 May cause an allergic skin reaction |
| Germ cell mutagenicity, Category 2 | H341 Suspected of causing genetic defects |
| Hazardous to the aquatic environment – Acute Hazard Category 3 | H402 Harmful to aquatic life |
| Hazardous to the aquatic environment – Chronic Hazard Category 3 | H412 Harmful to aquatic life with long lasting effects |

For the full text of H-statements: see section 16.

GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms
 Signal word



Danger

Hazard statements (GHS-US)

| | |
|------|--|
| H227 | Combustible liquid |
| H317 | May cause an allergic skin reaction |
| H334 | May cause an allergy or asthma symptoms or breathing difficulties if inhaled |
| H341 | Suspected of causing genetic defects |
| H402 | Harmful to aquatic life |
| H412 | Harmful to aquatic life with long lasting effects |

Precautionary statements (GHS-US)

| | |
|------|---|
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P210 | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. |
| P261 | Avoid breathing dust/fume/gas/mist/vapors/spray. |
| P272 | Contaminated work clothing must not be allowed out of the workplace |
| P273 | Avoid release to the environment. |

| | |
|-----------|--|
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P284 | [In case of inadequate ventilation] wear respiratory protection. |
| P302+P352 | If on skin: Wash with plenty of water |
| P304+P341 | If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing |
| P308+P313 | If exposed or concerned: Get medical advice/attention. |
| P321 | Specific treatment (see supplemental first aid instruction on this label) |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P342+P311 | If experiencing respiratory symptoms: Call a poison center or doctor |
| P363 | Wash contaminated clothing before reuse. |
| P370+P378 | In case of fire: Use media other than water to extinguish. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation |

Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3: Composition / Information on Ingredients

Mixtures

| Name | Common Name (synonyms) | Product identifier | % | GHS-US Classification |
|---------------------------------|--|--------------------|-----|--|
| cobalt(II)sulfate, heptahydrate | cobalt sulfate, heptahydrate / cobalt sulphate, heptahydrate / cobaltous sulfate, heptahydrate / sulfuric acid, cobalt(II)salt, heptahydrate | 10026-24-1 | < 2 | Acute Tox. 4 (Oral), H302 Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 2, H341 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |

Full text of hazard classes and H-statements: see section 16

SECTION 4: First Aid Measures

Description of first aid measures

Eye contact

Remove any contact lenses, locate eye-wash station, and flush eyes immediately with large amounts of water. Separate eyelids with fingers to ensure adequate flushing. Promptly call a physician.

Skin contact

Rinse skin thoroughly with large amounts of water. Remove contaminated clothing and shoes and call a physician.

Inhalation

Immediately relocate self or casualty to fresh air. If breathing is difficult, give cardiopulmonary resuscitation (CPR). Avoid mouth-to-mouth resuscitation.

Ingestion

Wash out mouth with water; Do NOT induce vomiting; call a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting Measures

Extinguishing media

Suitable extinguishing media

Water spray. Dry powder. Foam. Carbon dioxide.

Specific hazards arising from the chemical

Fire hazard: Combustible liquid.

Reactivity: The product is non-reactive under normal conditions of use, storage and transport.

Special protective equipment and precautions for fire-fighters

Protection during firefighting:

Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental Release Measures**Personal precautions, protective equipment and emergency procedures**

Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

For personal protection see section 8.

Environmental precautions

Do not let product enter drains. Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up

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

Reference to other sections

For disposal see section 13.

SECTION 7: Handling & Storage**Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep cool.

Storage temperature: 4 °C

Specific end use(s)

No data available.

SECTION 8: Exposure Controls / Personal Protection**Control parameters****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

Exposure controls**Appropriate engineering controls**

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

Personal protective equipment**Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

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

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

| | |
|---------------------------------|-------------------|
| a) Appearance | Form: liquid |
| b) Odor | No data available |
| c) Odor Threshold | No data available |
| d) pH | No data available |
| e) Melting point/freezing point | No data available |

| | |
|---|-------------------|
| f) Initial boiling point and boiling range | No data available |
| g) Flash point | No data available |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | No data available |
| k) Vapour pressure | no data available |
| l) Vapour density | No data available |
| m) Relative density | No data available |
| n) Water solubility | No data available |
| o) Partition coefficient: n-octanol/water | No data available |
| p) Auto-ignition temperature | No data available |
| q) Decomposition temperature | No data available |
| r) Viscosity | No data available |
| s) Explosive properties | No data available |
| t) Oxidizing properties | No data available |

Other safety information

No data available

SECTION 10: Stability & Reactivity

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

No data available

Incompatible materials

No additional information available

Hazardous decomposition products

Hazardous decomposition products.

SECTION 11: Toxicological Information

Information on toxicological effects

Acute toxicity

| Cobalt(II) sulfate, heptahydrate (10026-24-1) | |
|--|--|
| LD50 oral rat | 424 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male/female, Experimental value) |
| LD50 dermal rat | > 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male/female, Experimental value) |
| ATE US (oral) | 424 mg/kg body weight |

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity

Suspected of causing genetic defects

Carcinogenicity

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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional information

No data available

SECTION 12: Ecological Information

Toxicity

Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

| cobalt(II)sulfate, heptahydrate (10026-24-1) | |
|---|--|
| LC50 fish | 1 1.512 mg/l (ASTM, 96 h, Oncorhynchus mykiss, Flow-through system, Fresh water, Readacross) |
| ErC50 (algae) | 0.2 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value) |

Persistence and degradability

| cobalt(II)sulfate, heptahydrate (10026-24-1) | |
|---|-----------------------------------|
| Persistence and degradability | Biodegradability: not applicable. |
| Biochemical oxygen demand (BOD) | Not applicable (inorganic) |
| Chemical oxygen demand (COD) | Not applicable (inorganic) |
| ThOD | Not applicable (inorganic) |

Bioaccumulative potential

| cobalt(II)sulfate, heptahydrate (10026-24-1) | |
|---|--|
| BCF other aquatic organisms 1 | 2240 (3 day(s), Cyclotella, Static system, Fresh water, Read-across, Anhydrous form) |
| Bioaccumulative potential | Potential for bioaccumulation ($500 \leq \text{BCF} \leq 5000$). |

Mobility in soil

| cobalt(II)sulfate, heptahydrate (10026-24-1) | |
|---|---|
| Ecology – soil | No (test)data on mobility of the substance available. |

Other adverse effects

No data available.

SECTION 13: Disposal Considerations

Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport Information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Transport by sea

Transport document description (IMDG): UN 1993, 3
UN-No. (IMDG): 1993
Class (IMDG): 3 - Flammable liquids

Air transport

Transport document description (IATA): UN 1993, 3
UN-No. (IATA): 1993
Class (IATA): 3 - Flammable Liquids

SECTION 15: Regulatory Information

US Federal regulations

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

U.S. - California - Proposition 65 – Carcinogens List

Listed

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard.

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

No components are subject to the Pennsylvania Right to Know Act.

New Jersey Right To Know Components

No components are subject to the New Jersey Right to Know Act.

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other Information

Full text of H-phrases:

| | |
|------|--|
| H227 | Combustible liquid |
| H302 | Harmful if swallowed |
| H317 | May cause an allergic skin reaction |
| H334 | May cause an allergy or asthma symptoms or breathing difficulties if inhaled |
| H341 | Suspected of causing genetic defects |
| H400 | Very toxic to aquatic life |
| H402 | Harmful to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |
| H412 | Harmful to aquatic life with long lasting effects |

Disclaimer:

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It does not represent any guarantee of the properties of the product. Cepham Life Sciences Incorporated and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.