

SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: (4N) 99.99% Cobalt(II,III) Sulfide

Product Code: CO23-S-04

CAS Number: N/A

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 of the substance or mixture GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) Skin sensitisation (Category 1), H317 Acute aquatic toxicity (Category 1), H400 Chronic aquatic toxicity (Category 1), H410 GHS Label elements, including precautionary statements Pictogram



Signal word Warning Hazard statement(s) H317 May cause an allergic skin reaction. H410 Very toxic to aquatic life with long lasting effects. Precautionary statement(s) P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P321 Specific treatment (see supplemental first aid instructions on this label).

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P363 Wash contaminated clothing before reuse.

P391 Collect spillage.

P501 Dispose of contents/ container to an approved waste disposal plant. Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances Synonyms : Cobalt sulfide Formula : Co_3S_4

SECTION 4. FIRST AID MEASURES

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult 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) and/or in section 11

Indication of any immediate medical attention and special treatment needed No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Special hazards arising from the substance or mixture Sulphur oxides, Cobalt/cobalt oxides Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary. Further information No data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8. Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. 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 AND 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.

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

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

Moisture sensitive. Keep in a dry place.

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Face shield and safety glasses 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

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator.For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) 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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties Appearance Form: solid Odour No data available Odour Threshold No data available pH No data available Melting point/freezing point No data available Initial boiling point and boiling range No data available Flash point Not applicable Evaporation rate No data available Flammability (solid, gas) No data available Upper/lower flammability or explosive limits No data available Vapour pressure No data available Vapour density No data available Relative density No data available Water solubility No data available Partition coefficient: noctanol/ water No data available Auto-ignition temperature No data available Decomposition temperature No data available Viscosity No data available Explosive properties No data available Oxidizing properties No data available Other safety information No data available

SECTION 10. STABILITY AND 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 Strong oxidizing agents Hazardous decomposition products Other decomposition products - No data available In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity No data available Inhalation: No data available Dermal: No data available No data available Skin corrosion/irritation No data available Serious eye damage/eye irritation No data available Respiratory or skin sensitisation Germ cell mutagenicity No data available Carcinogenicity IARC: 2B - Group 2B: Possibly carcinogenic to humans (Cobalt sulfide) 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 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 RTECS: GG3310000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity No data available Persistence and degradability No data available Bioaccumulative potential No data available Mobility in soil No data available Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted Other adverse effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life. No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods Product Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT (US) Not dangerous goods IMDG UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Cobalt sulfide) Marine pollutant:yes IATA UN number: 3077 Class: 9 Packing group: III Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Cobalt sulfide) Further information EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

SECTION 15. REGULATORY INFORMATION

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. Chronic Health Hazard Massachusetts Right To Know Components No components are subject to the Massachusetts Right to Know Act. Pennsylvania Right To Know Components Cobalt sulfide. CAS-No. 1317-42-6 **Revision Date** 2007-03-01 New Jersey Right To Know Components Cobalt sulfide CAS-No. 1317-42-6 **Revision Date** 2007-03-01 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.

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 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.