

SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Cobalt Bromide Hexahydrate

Product Code: CO-BR-05-P.6HYD

CAS Number: 13762-12-4

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
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SECTION 2. HAZARDS IDENTIFICATION

Classification Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
Acute oral toxicity Category 4 Acute dermal toxicity Category 4 Acute Inhalation Toxicity - Dusts and
Mists Category 4 Skin Corrosion/Irritation Category 2 Serious Eye Damage/Eye Irritation Category 2
Specific target organ toxicity (single exposure) Category 3 Target Organs - Respiratory system. Label
Elements Signal Word: Warning



Hazard Statements H335 - May cause respiratory irritation H351 - Suspected of causing cancer H319 - Causes serious eye irritation H315 - Causes skin irritation H410 - Very toxic to aquatic life with long lasting effects H302 - Harmful if swallowed Precautionary Statements P281 - Use personal protective equipment as required P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray P273 - Avoid release to the environment P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell P302 + P352 - IF ON SKIN: Wash with plenty of soap and water P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component / CAS-No / Weight % Cobalt(II) bromide hexahydrate / 13762-12-4 / 100

SECTION 4. FIRST AID MEASURES

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention. Inhalation Remove to fresh air. Get medical attention. If not breathing, give artificial respiration. Ingestion Do NOT induce vomiting. Get medical attention. Most important symptoms and effects No information available.

SECTION 5. FIREFIGHTING MEASURES

Suitable Extinguishing Media Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. Unsuitable Extinguishing Media No information available Flash Point No information available Method - No information available Autoignition Temperature No information available 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 Non-combustible. Do not allow run-off from fire-fighting to enter drains or water courses. Hazardous Combustion Products Hydrogen halides. 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 0 Instability 1 Physical hazards N/A

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Ensure adequate ventilation. Use personal protective equipment as required. 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 and shovel into suitable containers for disposal. Do not let this chemical enter the environment.

SECTION 7. HANDLING AND STORAGE

Handling Avoid contact with skin and eyes. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance. Storage Keep in a dry, cool and well-ventilated place. Refer product specification and/or pro

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. Engineering Measures Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. 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 EN166. 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 Solid Appearance Reddish violet Odor No information available Odor Threshold No information available pH No information available Melting Point/Range No data available Boiling Point/Range No information available Flash Point No information available Evaporation Rate Not applicable Flammability (solid,gas) No information available Flammability or explosive limits Upper No data available Lower No data available Vapor Pressure No information available Vapor Density Not applicable Specific Gravity No information available Solubility No information available Partition coefficient; n-octanol/water No data available Autoignition Temperature No information available Decomposition Temperature No information available Viscosity Not applicable Molecular Formula $\text{Br}_2 \cdot \text{Co} \cdot \text{x H}_2\text{O}$ Molecular Weight 218.75

SECTION 10. STABILITY AND REACTIVITY

Reactive Hazard None known, based on information available Stability Stable. Hygroscopic. Conditions to Avoid Incompatible products. Exposure to moist air or water. Incompatible Materials Strong oxidizing agents, Metals Hazardous Decomposition Products Hydrogen halides Hazardous Polymerization Hazardous polymerization does not occur. Hazardous Reactions None under normal processing

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity Product Information Oral LD50 Category 4. ATE = 300 - 2000 mg/kg. Dermal LD50 Category 4. ATE = 1000 - 2000 mg/kg. Mist LC50 Category 4. ATE = 1 - 5 mg/l. Component Information Toxicologically Synergistic Products No information available Delayed and immediate effects as well as chronic effects from short and long-term exposure Irritation Irritating to eyes, respiratory system and skin Sensitization No information available Mutagenic Effects No information available Reproductive Effects No information available. Developmental Effects No information available. Teratogenicity No information available. STOT - single exposure Respiratory system STOT - repeated exposure None known Aspiration hazard No information available Symptoms / effects, both acute and delayed No information available Endocrine Disruptor Information No information available Other Adverse Effects The toxicological properties have not been fully investigated.

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. 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 UN-No UN3077 Proper Shipping Name Environmentally hazardous substances, solid, n.o.s. Hazard Class 9 Packing Group III TDG UN-No UN3077 Proper Shipping Name Environmentally

hazardous substances, solid, n.o.s. Hazard Class 9 Packing Group III IATA UN-No UN3077 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.* Hazard Class 9 Packing Group III IMDG/IMO UN-No UN3077 Proper Shipping Name Environmentally hazardous substances, solid, n.o.s. Hazard Class 9 Packing Group III

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazard Categories See section 2 for more information CWA (Clean Water Act) Not applicable OSHA - Occupational Safety and Health Administration Not applicable CERCLA Not applicable California Proposition 65 This product does not contain any Proposition 65 chemicals 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 Mexico - Grade No information available.

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.