

SAFETY DATA SHEET

Date Printed: 05/14/2024 Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifier: Barium Strontium Cobalt Ferrite

Product Code: BASRCO-FEIT-01-P

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

Emergency Overview OSHA Hazards Target Organ Effect, Toxic by ingestion, Corrosive Target Organs Heart, Nerves., Kidney, Gastrointestinal tract, Bone marrow, Spleen., Liver HMIS Classification Health Hazard: 3 Chronic Health Hazard: * Flammability: 0 Physical hazards: 0 NFPA Rating Health Hazard: 3 Fire: 0 Reactivity Hazard: 0



Potential Health Effects Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Skin May be harmful if absorbed through skin. Causes skin burns. Eyes Causes eye burns. Ingestion Toxic if swallowed. Causes burns.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Barium Strontium Cobalt Ferrite Powder CAS: N/A

SECTION 4. 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 Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician. In case of eye contact Continue rinsing eyes during transport to hospital.Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. If swallowed Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5. FIREFIGHTING MEASURES

Flammable properties Flash point not applicable Ignition temperature no data available Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Special protective equipment for fire-fighters Wear self contained breathing apparatus for fire fighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas. Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Methods for cleaning up Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Handling Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection. Storage Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place. Handle and store under inert gas. Air sensitive. Moisture sensitive.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Value Control parameters Update Basis . TWA 0.5 mg/m3 1993-06-30 US. Department of Labor -Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL) 29 CFR 1910.1000 Air Contaminants.

TWA 0.5 mg/m3 1989-03-01 US. Department of Labor -Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A

TWA 0.5 mg/m3 1996-05-18 US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004:Committees on Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs) Remarks The agent (mixture , or exposure circumstance) is not classifiable as to its carcinogenicity to humans . 1996 Adoption Refers to Appendix A -- Carcinogens.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Form powder Safety data pH no data available Melting point no data available Boiling point no data available Flash point not applicable Ignition temperature no data available Lower explosion limit no data available Upper explosion limit no data available

SECTION 10. STABILITY AND REACTIVITY

Storage stability Stable under recommended storage conditions. Conditions to avoid Avoid moisture. Materials to avoid acids, Acid chlorides, Acid anhydrides, Reducing agents Hazardous decomposition products Hazardous decomposition products formed under fire conditions. - Barium oxide

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity LD50 Intraperitoneal - mouse - 146 mg/kg Irritation and corrosion no data available Sensitisation no data available Chronic exposure This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. 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. 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. Signs and Symptoms of Exposure Cough, Shortness of breath, Headache, Nausea, Vomiting **Potential Health Effects** Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Skin May be harmful if absorbed through skin. Causes skin burns. Eyes Causes eye burns. Ingestion Toxic if swallowed. Causes burns. Target Organs Heart, Nerves., Kidney, Gastrointestinal tract, Bone marrow, Spleen., Liver, Additional Information RTECS: CQ9800000

SECTION 12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability) no data available Ecotoxicity effects no data available Further information on ecology

SECTION 13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. 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) UN-Number: 1884 Class: 6.1 Packing group: III Proper shipping name: Barium oxide Marine pollutant: No Poison Inhalation Hazard: No IMDG UN-Number: 1884 Class: 6.1 Packing group: III EMS-No: F-A, S-A Proper shipping name: BARIUM OXIDE Marine pollutant: No IATA UN-Number: 1884 Class: 6.1 Packing group: III

SECTION 15. REGULATORY INFORMATION

OSHA Hazards Target Organ Effect, Toxic by ingestion, Corrosive **DSL** Status All components of this product are on the Canadian DSL list. SARA 302 Components SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. SARA 313 Components Barium oxide, obtained by calcining witherite CAS-No. 1304-28-5 **Revision Date** 1989-12-01 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 Barium oxide, obtained by calcining witherite CAS-No. 1304-28-5 **Revision Date** 1989-12-01

New Jersey Right To Know Components Barium oxide, obtained by calcining witherite CAS-No. 1304-28-5 Revision Date 1989-12-01 California Prop. 65 Components This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

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.