

SAFETY DATA SHEET

Date Printed: 05/16/2024 Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifier: (3N) 99.9% Chromium(III) Bromide

Product Code: CR3-BR-03-C.AHYD

CAS Number: 10031-25-1

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 of the substance or mixture GHS05 Corrosion Skin Corr. 1C H314 Causes severe skin burns and eye damage. GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS). Hazard pictograms



GHS05 Signal word Danger Hazard statements H314 Causes severe skin burns and eye damage. Precautionary statements P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use. P231 Handle under inert gas. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P422 Store contents under inert gas. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. Classification system: NFPA ratings (scale 0 - 4) Health = 4Fire = 0Reactivity = 0HMIS-ratings (scale 0 - 4) HEALTH FIRE REACTIVITY Health = 4Fire = 0Reactivity = 0Other hazards Results of PBT and vPvB assessment PBT: N/A vPvB: N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances CAS # / Substance Name 10031-25-1 Chromium(III) bromide, anhydrous

SECTION 4. FIRST AID MEASURES

Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

If inhaled: In case of unconsciousness place patient stably in side position for transportation.

In case of skin contact: Immediately wash with soap and water; rinse thoroughly.

In case of eye contact: Rinse opened eye for several minutes under running water. Consult a physician.

If swallowed: Drink copious amounts of water and provide fresh air. Immediately call a doctor. Most important symptoms and effects, both acute and delayed:

No data available

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

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture No data available Advice for firefighters

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Keep unprotected persons away. Environmental precautions: Do not allow to enter sewers/ surface or groundwater. Methods and materials for containment and cleanup: Use neutralizing agent. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation. Reference to other sections See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling Thorough dedusting.

Handling: Handle under inert gas.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities: Store contents under inert gas.

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: Keep receptacle tightly sealed.

Specific end use(s) No data available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems: No further data; see item 7. Control parameters

Components with limit values that require monitoring at the workplace: Not required.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Breathing equipment: Not required.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the

chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. Eye protection: Tightly sealed goggles

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties Appearance: Form: Flakes Color: Dark green Odor: Acrid Odor threshold: No data available. pH: N/A Melting point/Melting range: Undetermined. Boiling point/Boiling range: Undetermined. Flash point: N/A Flammability (solid, gas): Product is not flammable. Ignition temperature: Decomposition temperature: No data available. Autoignition: No data available. Danger of explosion: Product does not present an explosion hazard. **Explosion limits:** Lower: No data available. Upper: No data available. Vapor pressure: N/A Density: No data available. Relative density No data available. Vapor density N/A Evaporation rate N/A Solubility in / Miscibility with Water: Insoluble. Partition coefficient (n-octanol/water): No data available. Viscosity: Dynamic: N/A Kinematic: N/A Organic solvents: 0.0 % Solids content: 100.0 % Other information No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity Chemical stability Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications. Possibility of hazardous reactions No dangerous reactions known. Conditions to avoid No data available Incompatible materials: No data available Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity: Primary irritant effect: on the skin: Strong caustic effect on skin and mucous membranes. on the eye: Strong caustic effect. Sensitization: No sensitizing effects known. Additional toxicological information: Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach. Carcinogenic categories IARC (International Agency for Research on Cancer) Substance is not listed. NTP (National Toxicology Program) Substance is not listed. OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity Aquatic toxicity: No data available Persistence and degradability No data available Bioaccumulative potential No data available Mobility in soil No data available Additional ecological information: Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach groundwater, water courses, or sewage systems. Must not reach bodies of water or drainage ditch undiluted or unneutralized. Results of PBT and vPvB assessment PBT: N/A vPvB: N/A Other adverse effects No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods Recommendation: Must not be disposed of together with household garbage. Do not allow product to enter drains, sewage systems, or other water courses system. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

UN-Number DOT, IMDG, IATA UN3260 UN proper shipping name DOT Corrosive solid, acidic, inorganic, n.o.s. IMDG, IATA CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. Transport hazard class(es) DOT **Class 8 Corrosive substances** Label 8 IMDG Label 8 ΙΑΤΑ **Class 8 Corrosive substances** Label 8 Packing group DOT, IMDG, IATA III Environmental hazards: Marine pollutant: No Special precautions for user Warning: Corrosive substances EMS Number: F-A,S-B Segregation groups Acids Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A Transport/Additional information: DOT Quantity limitations On passenger aircraft/rail: 25 kg On cargo aircraft only: 100 kg IMDG Limited quantities (LQ) 5 kg Excepted quantities (EQ) Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g UN "Model Regulation": UN3260, Corrosive solid, acidic, inorganic, n.o.s., 8, III

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture Sara Section 355 (extremely hazardous substances): Substance is not listed. Section 313 (Specific toxic chemical listings): Substance is not listed. TSCA (Toxic Substances Control Act): Substance is listed. Proposition 65 Chemicals known to cause cancer: Substance is not listed.

Chemicals known to cause reproductive toxicity for females: Substance is not listed. Chemicals known to cause reproductive toxicity for males: Substance is not listed. Chemicals known to cause developmental toxicity: Substance is not listed. Carcinogenic categories EPA (Environmental Protection Agency) Substance is not listed. TLV (Threshold Limit Value established by ACGIH) Substance is not listed. NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed. GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS) Hazard pictograms ~?GHS05 Signal word Danger Hazard statements H314 Causes severe skin burns and eye damage. Precautionary statements P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use. P231 Handle under inert gas. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses. if present and easy to do. Continue rinsing. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P422 Store contents under inert gas. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. National regulations: Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.