

SAFETY DATA SHEET

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

SECTION 1. IDENTIFICATION

Product Identifier: (4N) 99.99% Lead Chloride

Product Code: PB-CL-04

CAS Number: 7758-95-4

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 in accordance with 29 CFR 1910 (OSHA HCS) GHS08 Health hazard Repr. 1A H360 May damage fertility or the unborn child. STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure. GHS07 Acute Tox. 4 H302 Harmful if swallowed. Acute Tox. 4 H332 Harmful if inhaled. Hazards not otherwise classified No data available GHS label elements, including precautionary statements Hazard pictograms



GHS07 GHS08 Signal word Danger Hazard statements H302+H332 Harmful if swallowed or if inhaled. H360 May damage fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure. Precautionary statements P260 Do not breathe dust/fume/gas/mist/vapors/spray. P261 Avoid breathing dust/fume/gas/mist/vapors/spray. P281 Use personal protective equipment as required. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. WHMIS classification D1B - Toxic material causing immediate and serious toxic effects D2A - Very toxic material causing other toxic effects Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) HEALTH FIRE REACTIVITY 2 0 1 Health (acute effects) = 2Flammability = 0Physical Hazard = 1 Other hazards Results of PBT and vPvB assessment PBT: N/A vPvB: N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances CAS No. / Substance Name: 7758-95-4 Lead(II) chloride Identification number(s): EC number: 231-845-5

SECTION 4. FIRST AID MEASURES

Description of first aid measures If inhaled: Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm. Seek immediate medical advice. In case of skin contact: Immediately wash with soap and water; rinse thoroughly. Seek immediate medical advice. In case of eye contact: Rinse opened eye for several minutes under running water. Consult a physician. If swallowed: Seek medical treatment. Information for 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 Product is not flammable. Use fire-fighting measures that suit the surrounding fire. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Hydrogen chloride (HCI) Lead oxide fume Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Keep unprotected persons away. Ensure adequate ventilation Environmental precautions: Do not allow product to enter drains, sewage systems, or other water courses. Methods and materials for containment and cleanup: Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation. Prevention of secondary hazards: No special measures required. 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

Handling

Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Open and handle container with care.

Information about protection against explosions and fires: The product is not flammable Conditions for safe storage, including any incompatibilities

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

Information about storage in one common storage facility: Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. **Control parameters** Components with limit values that require monitoring at the workplace: 7758-95-4 Lead(II) chloride (100.0%) PEL (USA) Long-term value: 0.05 mg/m³ as Pb; See 29 CFR 1910.1025 REL (USA) Long-term value: 0.05* mg/m³ as Pb;*8-hr TWA; See Pocket Guide App. C TLV (USA) Long-term value: 0.05 mg/m³ as Pb; BEI EL (Canada) Long-term value: 0.05 mg/m³ as Pb; IARC 2A, R Ingredients with biological limit values: 7758-95-4 Lead(II) chloride (100.0%) BEI (USA) 30 μg/100 ml Medium: blood Time: not critical Parameter: Lead Additional information: No data Exposure controls Personal protective equipment Follow typical protective and hygienic practices for handling chemicals. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Store protective clothing separately. Maintain an ergonomically appropriate working environment. Breathing equipment: Use suitable respirator when high concentrations are present. Protection of hands: Impervious gloves Inspect gloves prior to use. The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer. Penetration time of glove material (in minutes) No data available Eve protection: Safety glasses Body protection: Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties Appearance: Form: Powder/crystalline/beads Color: White Odor: Odorless Odor threshold: No data available. pH: N/A Melting point/Melting range: 501 °C (934 °F) Boiling point/Boiling range: 951 °C (1744 °F) Sublimation temperature / start: No data available Flammability (solid, gas) No data available. Ignition temperature: No data available Decomposition temperature: No data available Autoignition: No data available. Danger of explosion: No data available. Explosion limits: Lower: No data available Upper: No data available Vapor pressure: N/A Density at 20 °C (68 °F): 5.85 g/cm³ (48.818 lbs/gal) Relative density No data available. Vapor density N/A Evaporation rate N/A

Solubility in / Miscibility with Water: No data available

Partition coefficient (n-octanol/water): No data available. Viscosity: Dynamic: N/A Kinematic: N/A Other information No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity No data available Chemical stability Stable under recommended storage conditions. Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications. Possibility of hazardous reactions Reacts with strong oxidizing agents Conditions to avoid No data available Incompatible materials: Oxidizing agents Hazardous decomposition products: Hydrogen chloride (HCl) Lead oxide fume

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity: Harmful if inhaled. Harmful if swallowed. The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance. LD/LC50 values that are relevant for classification: No data Skin irritation or corrosion: May cause irritation Eye irritation or corrosion: May cause irritation Sensitization: No sensitizing effects known.

Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

Carcinogenicity:

EPA-B2: Probable human carcinogen, sufficient evidence from animal studies; inadequate evidence or no data from epidemiologic studies.

NTP-R: Reasonably anticipated to be a carcinogen: limited evidence from studies in humans or sufficient evidence from studies in experimental animals.

ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s),

or by mechanism(s) not considered relevant to worker exposure. Available epidemologic studies do not confirm an increased risk of cancer in exposed humans.

Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

IARC-2A: Probably carcinogenic to humans: limited human evidence; sufficient evidence in experimental animals

Reproductive toxicity:

May damage fertility or the unborn child.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.

Specific target organ system toxicity - repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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

Ecotoxical effects:

Remark: Very toxic for aquatic organisms

Additional ecological information:

Do not allow product to reach groundwater, water courses, or sewage systems, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

May cause long lasting harmful effects to aquatic life.

Avoid transfer into the environment.

Very toxic for aquatic organisms

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 Consult official regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

UN-Number DOT, IMDG, IATA UN2291 UN proper shipping name DOT Lead compounds, soluble, n.o.s. (Lead(II) chloride) IMDG LEAD COMPOUND, SOLUBLE, N.O.S. (Lead(II) chloride), MARINE POLLUTANT IATA LEAD COMPOUND, SOLUBLE, N.O.S. (Lead(II) chloride) Transport hazard class(es) DOT Class 6.1 Toxic substances. Label 6.1 Class 6.1 (T5) Toxic substances Label 6.1 IMDG Class 6.1 Toxic substances. Label 6.1 ΙΑΤΑ Class 6.1 Toxic substances. Label 6.1 Packing group DOT, IMDG, IATA III Environmental hazards: Environmentally hazardous substance, solid; Marine Pollutant Marine pollutant (IMDG): Symbol (fish and tree) Special precautions for user Warning: Toxic substances EMS Number: F-A,S-A Segregation groups Heavy metals and their salts (including their organometallic compounds), lead and its compounds Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A Transport/Additional information: DOT Marine Pollutant (DOT): No Remarks: Special marking with the symbol (fish and tree). UN "Model Regulation": UN2291, Lead compounds, soluble, n.o.s. (Lead(II) chloride), 6.1, III

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture GHS label elements, including precautionary statements Hazard pictograms GHS07 GHS08 Signal word Danger Hazard statements H302+H332 Harmful if swallowed or if inhaled. H360 May damage fertility or the unborn child. H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P281 Use personal protective equipment as required.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

SARA Section 313 (specific toxic chemical listings)

7758-95-4 Lead(II) chloride

California Proposition 65

Prop 65 - Chemicals known to cause cancer

7758-95-4 Lead(II) chloride

Prop 65 - Developmental toxicity Substance is not listed.

Prop 65 - Developmental toxicity, female Substance is not listed.

Prop 65 - Developmental toxicity, male Substance is not listed.

Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the

market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed. 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.