SECTION 1. IDENTIFICATION

**Product Identifier:** (5N) 99.999% Lead Chromate

**Product Code:** PB-CRAT-05

**CAS Number:** 7758-97-6

**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

Carc. 1B  
H350 May cause cancer.

Repr. 1A  
H360 May damage fertility or the unborn child.

STOT RE 2 H373 May cause damage to the kidneys and the blood through prolonged or repeated exposure.

**Route of exposure:** Oral.

**Hazards not otherwise classified**  
No information known.

**Label elements**

**GHS label elements**

The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

**Hazard pictograms**

GHS08  
Signal word
Danger
Hazard statements
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H373 May cause damage to the kidneys and the blood through prolonged or repeated exposure.
Route of exposure: Oral.
Precautionary statements
P260
Do not breathe dust/fume/gas/mist/vapours/spray.
P281
Use personal protective equipment as required.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P314
Get medical advice/attention if you feel unwell.
P405
Store locked up.
P501
Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS classification
D2A - Very toxic material causing other toxic effects
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)
Health (acute effects) = 2
Flammability = 0
Physical Hazard = 1
Other hazards
Results of PBT and vPvB assessment
PBT:
Not applicable.
vPvB:
Not applicable.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Substances
CAS# Description:
7758-97-6 Lead(II) chromate
Identification number(s):
EC number: 231-846-0
Index number: 082-004-00-2

SECTION 4. FIRST AID MEASURES

Description of first aid measures
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
After skin contact
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing
Seek medical treatment.

Information for doctor
Most important symptoms and effects, both acute and delayed
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information 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:
Lead oxide fume
Chromium oxides

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
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

Environmental precautions:
Do not allow material to be released to the environment without proper governmental permits.

Methods and material for containment and cleaning up:
Dispose of contaminated material as waste according to section 13.

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

Storage
Requirements to be met by storerooms and receptacles:
No special requirements.
Information about storage in one common storage facility:
Do not store with organic materials.
Store away from metal powders.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Specific end use(s)
No further relevant information available.

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:
7758-97-6 Lead(II) chromate (100.0%)
PEL (USA)
Long-term value: 0.005* mg/m³
Ceiling limit value: 0.1** mg/m³
*as Cr(VI) **as CrO₃; see 29 CFR 1910.1026
REL (USA)
Long-term value: 0.001 mg/m³
as Cr; See Pocket Guide Apps. A and C
TLV (USA)
Long-term value: 0.05* 0.012** mg/m³
*as Pb; BEI ; **as Cr
EL (Canada) Long-term value: 0.05* 0.012** mg/m³
ACIGH A2, IARC 2A; R; *as Pb;**as Cr
EV (Canada) Long-term value: 0.012* 0.05** mg/m³
*as Cr, **as Pb
Ingredients with biological limit values:
7758-97-6 Lead(II) chromate (100.0%)
BEI (USA) 30 ⅓g/100 ml
Medium: blood
Time: not critical
Parameter: Lead
10 ⅓g/100 ml
Medium: blood
Time: not critical
Parameter: Lead (women of child bearing potential)
Additional information:
No data
Exposure controls
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
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.
Recommended filter device for short term use:
Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls.
Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Material of gloves
Nitrile rubber, NBR

Penetration time of glove material (in minutes)
480

Glove thickness
0.11 mm

Eye protection:
Safety glasses

Body protection:
Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties
General Information
Appearance:
Form: Powder
Color: Yellow
Odor: Odorless
Odor threshold: Not determined.

pH-value: Not applicable.

Change in condition
Melting point/Melting range: 844 °C (1551 °F)
Boiling point/Boiling range: Not determined
Sublimation temperature / start: Not determined

Flammability (solid, gaseous)
Not determined.

Ignition temperature: Not determined
Decomposition temperature: Not determined
Auto igniting: Not determined.
Danger of explosion: Not determined.

Explosion limits:
Lower: Not determined
Upper: Not determined

Vapor pressure at 20 °C (68 °F): 0 hPa
Density at 20 °C (68 °F): 6.3 g/cm³ (52.574 lbs/gal)
Relative density
Not determined.

Vapor density
Evaporation rate: Not applicable.
Solubility in / Miscibility with Water at 25 °C (77 °F): 0.000058 g/l
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
  dynamic: Not applicable.
  kinematic: Not applicable.
Other information:
  No further relevant information available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity:
  No information known.
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:
  No dangerous reactions known.
Conditions to avoid:
  No further relevant information available.
Incompatible materials:
  Organic materials
  Metal powders
Hazardous decomposition products:
  Lead oxide fume
  Chromium oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:
Acute toxicity:
  The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.
LD/LC50 values that are relevant for classification:
  Oral LD50 >12000 mg/kg (mouse)
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:
  May cause cancer.
EPA-B2: Probable human carcinogen, sufficient evidence from animal studies; inadequate evidence or no data from epidemiologic studies.
ACGIH A2: Suspected human carcinogen: Agent is carcinogenic in experimental animals at dose levels, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. Available epidemiologic studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans.  
NTP-K: Known to be carcinogenic: sufficient evidence from human studies.  
(inhalation) EPA-A: human carcinogen: sufficient evidence from epidemiologic studies to support a causal association between exposure and cancer.  
(inhalation) EPA-K: Known human carcinogens.  
(oral) EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available.  
(oral) EPA-CBD: Carginogenic potential cannot be determined.  
The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.  
Reproductive toxicity:  
May damage fertility or the unborn child.  
Specific target organ system toxicity - repeated exposure:  
May cause damage to the kidneys and the blood through prolonged or repeated exposure. Route of exposure: Oral.  
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 further relevant information available.  
Persistence and degradability  
No further relevant information available.  
Bioaccumulative potential  
No further relevant information available.  
Mobility in soil  
No further relevant information available.  
Ecotoxicological effects:  
Remark:  
Very toxic for aquatic organisms  
Additional ecological information:  
General notes:  
Do not allow material to be released to the environment without proper governmental permits.  
Do not allow product to reach ground water, water course or sewage system, 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:
Not applicable.
vPvB:
Not applicable.
Other adverse effects
No further relevant information available.

SECTION 13. DISPOSAL CONSIDERATIONS
Waste treatment methods
Recommendation
Consult state, local or national 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
UN3077
UN proper shipping name
DOT
Environmentally hazardous substances, solid, n.o.s. (Lead(II) chromate)
IMDG, IATA
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead(II) chromate)
Transport hazard class(es)
DOT, IMDG
Class
9 Miscellaneous dangerous substances and articles.
Label
9
Class
9 (M7) Miscellaneous dangerous substances and articles
Label
9
IATA
Class
9 Miscellaneous dangerous substances and articles.
Label
9
Packing group
DOT, IMDG, IATA
III
Environmental hazards:
Special marking (ADR):
Symbol (fish and tree)
Special marking (IATA):
Symbol (fish and tree)
Special precautions for user
Warning: Miscellaneous dangerous substances and articles
EMS Number: F-A,S-F
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.
Transport/Additional information:
DOT
Marine Pollutant (DOT):
No
UN "Model Regulation":
UN3077, Environmentally hazardous substances, solid, n.o.s. (Lead(II) chromate), 9, III

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
GHS label elements
The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)
Hazard pictograms
GHS08
Signal word
Danger
Hazard statements
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H373 May cause damage to the kidneys and the blood through prolonged or repeated exposure.
Route of exposure: Oral.
Precautionary statements
P260
Do not breathe dust/fume/gas/mist/vapours/spray.
P281
Use personal protective equipment as required.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P314
Get medical advice/attention if you feel unwell.
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)
7758-97-6 Lead(II) chromate
California Proposition 65
Prop 65 - Chemicals known to cause cancer
7758-97-6 Lead(II) chromate
Prop 65 - Developmental toxicity
Substance is not listed.
Prop 65 - Developmental toxicity, female
7758-97-6 Lead(II) chromate
Prop 65 - Developmental toxicity, male
7758-97-6 Lead(II) chromate
Information about limitation of use:
Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.
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. This substance is included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH). 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 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 1997-2019 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.