SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Mercury Chloride

Product Code: HG2-CL2-05

CAS Number: 7487-94-7

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)

GHS06 Skull and crossbones
Acute Tox. 2 H300 Fatal if swallowed.
GHS08 Health hazard
Muta. 2 H341 Suspected of causing genetic defects.
Repr. 2 H361 Suspected of damaging fertility or the unborn child.
STOT RE 1 H372 Causes damage to the lung, the kidneys, the liver, the heart, the reproductive system, the blood, the brain, the endocrine system and the immune system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative, Dermal.
GHS05 Corrosion
Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Hazards not otherwise classified
No data available
GHS label elements
GHS label elements, including precautionary statements
Hazard pictogram

GHS05
GHS06
GHS08
Signal word
Danger
Hazard statements
H300 Fatal if swallowed.
H314 Causes severe skin burns and eye damage.
H341 Suspected of causing genetic defects.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to the lung, the kidneys, the liver, the heart, the reproductive system, the blood, the brain, the endocrine system and the immune system through prolonged or repeated exposure.
Route of exposure: Oral, Inhalative, Dermal.
Precautionary statements
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...
P303+P361+P353 If on skin (or hair): 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.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS classification
D1A - Very toxic material causing immediate and serious toxic effects
D2A - Very toxic material causing other toxic effects
E - Corrosive material
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)
HEALTH
FIRE
REACTIVITY
3
0
1
Health (acute effects) = 3
Flammability = 0
Physical 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: 7487-94-7 Mercury(II) chloride
Identification number(s):
EC number: 231-299-8
Index number: 080-010-00-X
SECTION 4. FIRST AID MEASURES

Description of first aid measures
General information
Immediately remove any clothing soiled by the product.
In case of irregular breathing or respiratory arrest provide artificial respiration.
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:
Do not induce vomiting; immediately call for medical help.
Information for doctor
Most important symptoms and effects, both acute and delayed
Causes severe skin burns.
Causes serious eye damage.
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:
Mercury oxide
Hydrogen chloride (HCl)
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:
Use neutralizing agent.
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
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.
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 strong bases.
Store away from oxidizing agents.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well-sealed containers.

Specific end use(s)
No data 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:
7487-94-7 Mercury(II) chloride (100.0%)

PEL (USA) Long-term value: 0.1 mg/m³
as Hg; see OSHA standard interpretation memo

REL (USA) Long-term value: 0.05* mg/m³
Ceiling limit value: 0.1 mg/m³
as Hg; *Vapor; Skin

TLV (USA) Long-term value: 0.025 mg/m³
as Hg; Skin; BEI

EL (Canada) Long-term value: 0.025 mg/m³
as Hg; Skin, R

EV (Canada) Long-term value: 0.025 mg/m³
as Hg, Skin

Ingredients with biological limit values:
7487-94-7 Mercury(II) chloride (100.0%)
BEI (USA) 35 µg/L
Medium: urine
Time: prior to shift
Parameter: Total inorganic mercury (background)
15 µg/L  
Medium: blood  
Time: end of shift at end of workweek  
Parameter: Total inorganic mercury (background)  
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.  
Avoid contact with the eyes and skin.  
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.  
Suitability of gloves should be determined both by material and quality, the latter of which may vary by manufacturer.  
Penetration time of glove material (in minutes)  
No data available  
Eye protection:  
Tightly sealed goggles  
Full face protection  
Body protection:  
Protective work clothing.  

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties  
Appearance:  
Form: Powder  
Color: White  
Odor: Odorless  
Odor threshold: No data available.  
pH: N/A  
Melting point/Melting range: 280-282 °C (536-540 °F)  
Boiling point/Boiling range: 302 °C (576 °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 at 20 °C (68 °F): 0.0001 hPa  
Density at 20 °C (68 °F): 5.4 g/cm³ (45.063 lbs/gal)  
Relative density: No data available.  
Vapor density: N/A
Evaporation rate: N/A
Solubility in / Miscibility with Water at 20 °C (68 °F): 69 g/l
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:
Bases
Oxidizing agents
Hazardous decomposition products:
Mercury oxide
Hydrogen chloride (HCl)

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
Fatal if swallowed.
Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.
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 1 mg/kg (rat)
Skin irritation or corrosion:
Causes severe skin burns.
Eye irritation or corrosion:
Causes serious eye damage.
Sensitization:
No sensitizing effects known.
Germ cell mutagenicity:
Suspected of causing genetic defects.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.
Carcinogenicity:
EPA-C: Possible human carcinogen: limited evidence of carcinogenicity in animals in the absence of
human data.
IARC-3: Not classifiable as to carcinogenicity to humans.
ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.
Reproductive toxicity:
Suspected of damaging 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:
Causes damage to the lung, the kidneys, the liver, the heart, the reproductive system, the blood, the brain, the endocrine system and the immune system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative, Dermal.
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
Ecotoxicological 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
UN1624
UN proper shipping name
DOT
Mercuric chloride
IMDG
MERCURIC CHLORIDE, MARINE POLLUTANT
IATA
MERCURIC 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
IATA
Class
6.1 Toxic substances
Label
6.1
Packing group
DOT, IMDG, IATA
II
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), mercury and mercury 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":
UN1624, Mercuric chloride, 6.1, II

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
GHS GHS label elements, including precautionary statements
Hazard pictograms
GHS05
GHS06
GHS08
Signal word
Danger
Hazard statements
H300 Fatal if swallowed.
H314 Causes severe skin burns and eye damage.
H341 Suspected of causing genetic defects.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to the lung, the kidneys, the liver, the heart, the reproductive system, the blood, the brain, the endocrine system and the immune system through prolonged or repeated exposure.
Route of exposure: Oral, Inhalative, Dermal.
Precautionary statements
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...
P303+P361+P353 If on skin (or hair): 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.
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)
7487-94-7 Mercury(II) chloride
California Proposition 65
Prop 65 - Chemicals known to cause cancer
Substance is not listed.
Prop 65 - Developmental toxicity
7487-94-7 Mercury(II) chloride
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.
This product is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.
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 1997-2019 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.