SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifier: (2N) 99% Nickel(II) Chloride Hexahydrate

Product Code: NI-CL-02-C.6HYD

CAS Number: 7791-20-0

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
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Muta. 2
H341 Suspected of causing genetic defects.
Carc. 1A
H350 May cause cancer.
Repr. 1B
H360 May damage fertility or the unborn child.
STOT RE 1
H372 Causes damage to the digestive system and the brain through prolonged or repeated exposure.
Route of exposure: Oral.
GHS07
Acute Tox. 4
H302 Harmful if swallowed.
Skin Irrit. 2
H315 Causes skin irritation.
Skin Sens. 1
H317 May cause an allergic skin reaction.
Hazards not otherwise classified
No data available

GHS label elements
GHS label elements, including precautionary statements
Hazard pictograms



GHS07 GHS08
Signal word
Danger
Hazard-determining components of labeling:
Nickel(II) chloride hexahydrate
Hazard statements
H302 Harmful if swallowed.
H315 Causes skin irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H372 Causes damage to the digestive system and the brain through prolonged or repeated exposure.
Route of exposure: Oral.
Precautionary statements
P260
Do not breathe dust/fume/gas/mist/vapors/spray.
P284
In case of inadequate ventilation wear respiratory protection.
P261
Avoid breathing dust/fume/gas/mist/vapors/spray.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
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:
N/A
vPvB:
N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures
Dangerous components:

7791-20-0 Nickel(II) chloride hexahydrate
Acute Tox. 3, H301; Acute Tox. 3, H331;
Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1A, H350; Repr. 1B, H360; STOT RE 1, H372;
Skin Irrit. 2, H315; Skin Sens. 1, H317
Additional information
None known.
Non-Hazardous Ingredients 7732-18-5 Water

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 (HCl)
Nickel 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
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:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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:
Water reacts with many metals to give hydrogen, often violently. Water is also incompatible with many reactive organic and inorganic chemicals.
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:
7791-20-0 Nickel(II) chloride hexahydrate (11.9%)

PEL (USA) Long-term value: 1 mg/m^3
as Ni

TLV (USA) Long-term value: 0.1 mg/m^3
as Ni
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.
Do not inhale dust / smoke / mist.
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:
Safety glasses
Body protection:
Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties
Appearance:
Form: Liquid
Color: Green
Odor: Odorless
Odor threshold: No data available.
pH: No data available.
Melting point/Melting range: No data available
Boiling point/Boiling range: No data available
Sublimation temperature / start: No data available
Flammability (solid, gas)
No data available.
Ignition temperature: No data available
Decomposition temperature: No data available
Autoignition: Product is not selfigniting.
Danger of explosion: No data available.
Explosion limits:
Lower: No data available
Upper: No data available
Vapor pressure at 20 °C (68 °F): 23 hPa (17 mm Hg)
Density: No data available
Relative density
No data available.
Vapor density
No data available.
Evaporation rate
No data available.
Solubility in Water (H_2O): Fully miscible
Partition coefficient (n-octanol/water): No data available.
Viscosity:
Dynamic: No data available.
Kinematic: No data available.
Solvent content:
Organic solvents: 0.0 %

Solids content: 11.9 %
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
Water reacts violently with alkali metals.
Water reacts with many metals to give hydrogen, often violently. Water is also incompatible with many reactive organic and inorganic chemicals.
Conditions to avoid
No data available
Incompatible materials:
No data available
Hazardous decomposition products:
Hydrogen chloride (HCl)
Nickel oxides

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 components in this product.
LD/LC50 values that are relevant for classification:
7791-20-0 Nickel(II) chloride hexahydrate
Oral LD50 105 mg/kg (rat)
Skin irritation or corrosion:
May cause irritation
Eye irritation or corrosion:
May cause irritation
Sensitization:
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Germ cell mutagenicity:
Suspected of causing genetic defects.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.
Carcinogenicity:
May cause cancer.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity:

May damage fertility or the unborn child.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.
Specific target organ system toxicity - repeated exposure:
Causes damage to the digestive system and the brain 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.
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant
Carcinogenic if inhaled.
May cause harm to the unborn child.

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:
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.
Toxic to aquatic life.
May cause long lasting harmful effects to aquatic life.
Avoid transfer into the environment.
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.
Recommended cleansing agent:
Water, if necessary with cleansing agents.

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, IMDG, IATA
UN3082
UN proper shipping name
DOT
Environmentally hazardous substances, liquid, n.o.s. (Nickel(II) chloride hexahydrate)
IMDG
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nickel(II) chloride hexahydrate), MARINE POLLUTANT
IATA
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nickel(II) chloride hexahydrate)
Transport hazard class(es)
DOT, IMDG, IATA
Class
9 Miscellaneous dangerous substances and articles.
Label
9
Class
9 (M6) Miscellaneous dangerous substances and articles
Label
9
Packing group
DOT, IMDG, IATA
III
Environmental hazards:
Marine pollutant (IMDG):
Symbol (fish and tree)
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
N/A
Transport/Additional information:
DOT
Marine Pollutant (DOT):
No
Remarks:
Special marking with the symbol (fish and tree).

UN "Model Regulation":
UN3082, Environmentally hazardous substances, liquid, n.o.s. (Nickel(II) chloride hexahydrate), 9, III

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
GHS07
GHS08
Signal word
Danger
Hazard-determining components of labeling:
Nickel(II) chloride hexahydrate
Hazard statements
H302 Harmful if swallowed.
H315 Causes skin irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H372 Causes damage to the digestive system and the brain through prolonged or repeated exposure.
Route of exposure: Oral.
Precautionary statements
P260
Do not breathe dust/fume/gas/mist/vapors/spray.
P284
In case of inadequate ventilation wear respiratory protection.
P261
Avoid breathing dust/fume/gas/mist/vapors/spray.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
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)
7791-20-0 Nickel(II) chloride hexahydrate
11.9%
California Proposition 65
Prop 65 - Chemicals known to cause cancer
7791-20-0 Nickel(II) chloride hexahydrate
11.9%
Prop 65 - Developmental toxicity
None of the ingredients are listed.
Prop 65 - Developmental toxicity, female
None of the ingredients are listed.
Prop 65 - Developmental toxicity, male
None of the ingredients are 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.
None of the ingredients are 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.
None of the ingredients is listed.
Annex XIV of the REACH Regulations (requiring Authorisation for use)
None of the ingredients is listed.
Chemical safety assessment:
A Chemical Safety Assessment has not been carried out.

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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.