

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 17.07.2021

Revision: 17.07.2021

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
- **Trade name:** Nickel(II) chloride, anhydrous, (99.99+%Ni) PURATREM
- **Item number:** 28-1165
- **CAS Number:**  
7718-54-9
- **EC number:**  
231-743-0
- **Index number:**  
028-011-00-6
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Strem Chemicals, Inc.  
7 Mulliken Way  
NEWBURYPORT, MA 01950  
USA  
info@strem.com
- **Further information obtainable from:** Technical Department
- **1.4 Emergency telephone number:**  
EMERGENCY: CHEMTREC: + 1 (800) 424-9300  
During normal opening times: +1 (978) 499-1600

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 3      H301    Toxic if swallowed.

Acute Tox. 3      H331    Toxic if inhaled.



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            H350i   May cause cancer by inhalation.

Repr. 1B            H360D   May damage the unborn child.

STOT RE 1          H372    Causes damage to organs through prolonged or repeated exposure.



GHS09 environment

Aquatic Acute 1    H400    Very toxic to aquatic life.

Aquatic Chronic 1 H410    Very toxic to aquatic life with long lasting effects.

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GHS07

Skin Irrit. 2      H315    Causes skin irritation.  
Skin Sens. 1      H317    May cause an allergic skin reaction.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS06    GHS08    GHS09

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

*nickel dichloride*

· **Hazard statements**

H301+H331 *Toxic if swallowed or if inhaled.*  
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.*  
H350i           *May cause cancer by inhalation.*  
H360D           *May damage the unborn child.*  
H372            *Causes damage to organs through prolonged or repeated exposure.*  
H410            *Very toxic to aquatic life with long lasting effects.*

· **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.*  
P284           *[In case of inadequate ventilation] wear respiratory protection.*  
P260           *Do not breathe dust/fume/gas/mist/vapours/spray.*  
P301+P310 *IF SWALLOWED: Immediately call a POISON CENTER/ doctor.*  
P403+P233 *Store in a well-ventilated place. Keep container tightly closed.*  
P501           *Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.  
· **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**

· **3.1 Chemical characterisation: Substances**

· **CAS No. Description**

7718-54-9 nickel dichloride

· **Identification number(s)**

· **EC number:** 231-743-0

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**SECTION 4: First aid measures**

· **4.1 Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

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

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**SECTION 5: Firefighting measures**

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

· **5.2 Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

· **5.3 Advice for firefighters**

· **Protective equipment:** Mouth respiratory protective device.

**SECTION 6: Accidental release measures**

· **6.1 Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.

· **6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **6.4 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**

· **7.1 Precautions for safe handling**

Thorough dedusting.

Ensure good ventilation/exhaustion at the workplace.

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Open and handle receptacle with care.

- **Handling:** Handle under inert gas.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:** 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 container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

**7718-54-9 nickel dichloride**

WEL	Long-term value: 0.1 mg/m <sup>3</sup> as Ni; Sk; Carc; Sen
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- **Additional information:** The lists valid during the making were used as basis.

· **8.2 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.
- Store protective clothing separately.
- Avoid contact with the skin.
- Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **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.

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· **Eye protection:**



Tightly sealed goggles

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· <b>Form:</b>	Powder
· <b>Colour:</b>	Yellow
· <b>Odour:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

· <b>Melting point/freezing point:</b>	1.001 °C
· <b>Initial boiling point and boiling range:</b>	Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Not determined.

· **Ignition temperature:**

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Not determined.

· **Explosive properties:** Product does not present an explosion hazard.

· **Explosion limits:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

· **Vapour pressure:** 1 hPa

· <b>Density at 20 °C:</b>	3.55 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.

· **Solubility in / Miscibility with water at 20 °C:** 550 g/l

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

· <b>Dynamic:</b>	Not applicable.
· <b>Kinematic:</b>	Not applicable.

· **Solvent content:**

· <b>Organic solvents:</b>	0.0 %
· <b>VOC (EC)</b>	0.00 %

· **Solids content:** 100.0 %

· **9.2 Other information** No further relevant information available.

**SECTION 10: Stability and reactivity**

· **10.1 Reactivity** No further relevant information available.

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- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

**SECTION 11: Toxicological information**

· **11.1 Information on toxicological effects**

· **Acute toxicity**

Toxic if swallowed or if inhaled.

· **LD/LC50 values relevant for classification:**

**7718-54-9 nickel dichloride**

Oral	LD50	105 mg/kg (rat)
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· **Primary irritant effect:**

· **Skin corrosion/irritation**

Causes skin irritation.

· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

· **Respiratory or skin sensitisation**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity**

Suspected of causing genetic defects.

· **Carcinogenicity**

May cause cancer by inhalation.

· **Reproductive toxicity**

May damage the unborn child.

· **STOT-single exposure** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**

· **12.1 Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Remark:** Very toxic for fish

· **Additional ecological information:**

· **General notes:**

Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water

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.

Very toxic for aquatic organisms

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- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

**SECTION 14: Transport information**

- |  |   |
|--|---|
| · <b>14.1 UN-Number</b>  |   |
| · <b>ADR, IMDG, IATA</b>   | UN3288  |
| · <b>14.2 UN proper shipping name</b>  |   |
| · <b>ADR</b>   | 3288 TOXIC SOLID, INORGANIC, N.O.S.   |
| · <b>IMDG, IATA</b>  | TOXIC SOLID, INORGANIC, N.O.S.  |
| · <b>14.3 Transport hazard class(es)</b>   |   |
| · <b>ADR, IMDG</b>   |   |
|  |  |
| · <b>Class</b>   | 6   |
| · <b>Label</b>   | 6.1   |
| <hr style="border-top: 1px dashed black;"/>                                      |   |
| · <b>IATA</b>  |   |
|  |  |
| · <b>Class</b>   | 6.1 Toxic substances.   |
| · <b>Label</b>   | 6.1   |
| · <b>14.4 Packing group</b>  |   |
| · <b>ADR, IMDG, IATA</b>   | III   |
| · <b>14.5 Environmental hazards:</b>   | Not applicable.   |
| · <b>14.6 Special precautions for user</b>                                       | Not applicable.   |
| · <b>EMS Number:</b>   | F-A,S-A   |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable.   |

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**· Transport/Additional information:**

**· ADR**

- **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":** UN 3288 TOXIC SOLID, INORGANIC, N.O.S., 6.1, III

**SECTION 15: Regulatory information**

**· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category**  
H2 ACUTE TOXIC  
E1 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 27, 28, 30

**· National regulations:**

**· Additional classification according to Decree on Hazardous Materials, Annex II:**

- Carcinogenic hazardous material group I (extremely dangerous).
- Carcinogenic hazardous material group II (very dangerous).
- Carcinogenic hazardous material group III (dangerous).

**· 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.

· **Waterhazard class:** Water hazard class 3 (Assessment by list): extremely hazardous for water.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing SDS:** Technical Department.

· **Contact:** Technical Director

**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity – Category 3

Skin Irrit. 2: Skin corrosion/irritation – Category 2

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*Resp. Sens. 1: Respiratory sensitisation – Category 1*

*Skin Sens. 1: Skin sensitisation – Category 1*

*Muta. 2: Germ cell mutagenicity – Category 2*

*Carc. 1A: Carcinogenicity – Category 1Ai*

*Repr. 1B: Reproductive toxicity – Category 1B*

*STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1*

*Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1*

*Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1*

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