



LTS Research Laboratories, Inc.
Safety Data Sheet
Nickel (II) chloride

1. Product and Company Identification

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| Trade Name: | Nickel (II) chloride |
| Chemical Formula: | NiCl ₂ |
| Recommended Use: | Scientific research and development |
| Manufacturer/Supplier: | LTS Research Laboratories, Inc. |
| Street: | 37 Ramland Road |
| City: | Orangeburg |
| State: | New York |
| Zip Code: | 10962 |
| Country: | USA |
| Tel #: | 855-587-2436 / 855-lts-chem |
| 24-Hour Emergency Contact: | 800-424-9300 (US & Canada) +1-703-527-3887 (International) |



2. Hazards Identification

Signal Word:

Danger



Hazard Statements:

H301+H331: Toxic if swallowed or if inhaled
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341: Suspected of causing genetic defects.
H350: May cause cancer.
H360: May damage fertility or 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:

P260: Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
P285: In case of inadequate ventilation wear respiratory protection.
P301+P310+P330: IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P304+P340+P311: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.
P308+P313: IF exposed or concerned: Get medical advice/ attention.
P333+P313: If skin irritation or rash occurs: Get medical advice/ attention.
P362: Take off contaminated clothing and wash before reuse.
P391: Collect spillage.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents/ container to an approved waste disposal plant.

HMIS Health Ratings (0-4):

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| Health: | 2 |
| Flammability: | 0 |
| Physical: | 1 |

3. Composition

Chemical Family: Nonmetal
Additional Names: Nickel dichloride

Nickel (II) chloride (NiCl₂):
Percentage: 100 wt%
CAS #: 7718-54-9
EC #: 231-743-0

4. First Aid Procedures

General Treatment: Seek medical attention if symptoms persist.
Special Treatment: None
Important Symptoms: None

Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult. Keep patient warm. Seek immediate medical attention.
Ingestion: Seek immediate medical attention.
Skin: Immediately wash affected area with mild soap and water. Remove any contaminated clothing. Seek immediate medical attention.
Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention.

5. Firefighting Measures

Flammability: Non-flammable
Extinguishing Media: No special restrictions – use suitable extinguishing agent for surrounding material and type of fire.
Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled: Wear appropriate respiratory and protective equipment specified in special protection information. Keep unprotected persons away. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions: Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions: Handle under dry protective gas. Avoid contact with skin and eyes. Wash thoroughly after handling.
Storage Conditions: Store in a cool dry place in a tightly sealed container. Store under dry inert gas. Store away from oxidizing agents, water/moisture. This product is hygroscopic. Protect from humidity and water. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance: Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation: Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

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| Permissible Exposure Limits: | 1 mg/m ³ as Ni, long-term value |
| Threshold Limit Value: | 0.1 mg/m ³ as Ni, long-term value as inhalable fraction |
| Special Equipment: | Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. |
| Respiratory Protection: | Dust Respirator |
| Protective Gloves: | Nitrile rubber gloves with minimum thickness of 0.11 mm |
| Eye Protection: | Safety glasses or goggles |
| Body Protection: | Protective work clothing. Wear close-toed shoes and long sleeves/pants. |

9. Physical and Chemical Characteristics

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| Color | N/A |
| Form: | Powder, Granules, Pellets, Sputtering target, Custom parts |
| Odor: | Odorless |
| Water Solubility: | 642 g/L |
| Boiling Point: | N/A |
| Melting Point: | 1,001 °C |
| Flash Point: | N/A |
| Autoignition Temperature: | N/A |
| Density: | 3.55 g/cc |
| Molecular weight: | 129.60 g/mol |

10. Reactivity

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| Stability: | Stable under recommended storage conditions |
| Reacts With: | Oxidizing agents, peroxides |
| Incompatible Conditions: | Water/moisture |
| Hazardous Decomposition Products: | Metal oxide fume, hydrogen chloride, nickel oxides |

11. Toxicological Information

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| Potential Health Effects: | |
| Eyes: | May cause irritation |
| Skin: | Causes skin irritation |
| Ingestion: | Toxic if swallowed |
| Inhalation: | Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties. |
| Chronic: | Causes damage to organs through prolonged or repeated exposure. |
| Signs & Symptoms: | Gastrointestinal disturbance |
| Aggravated Medical Conditions: | N/A |
| Median Lethal Dose: | 186 mg/kg for rat by mouth |
| Carcinogen: | May cause cancer. May damage fertility of the unborn child; presumed human reproductive toxicant. Human carcinogen. IARC: 1 - Group 1: Carcinogenic to humans (Nickel (II) chloride) NTP: Known to be human carcinogen (Nickel (II) chloride) |

12. Ecological Information

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| Aquatic Toxicity: | Toxicity to fish mortality NOEC - Oncorhynchus mykiss (rainbow trout) - 4.9 mg/l - 96.0 h |
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| <p>Persistent Bioaccumulation Toxicity:</p> <p>Very Persistent, Very Bioaccumulative:</p> <p>Notes:</p> | <p>Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 6.0 - 9.3 mg/l - 48 h</p> <p>Toxicity to algae EC50 - Pseudokirchneriella subcapitata (green algae) - 0.006 - 0.012 mg/l – 96 h</p> <p>Bioaccumulation Oncorhynchus mykiss (rainbow trout) - 180 d - 1,000 µg/l</p> <p>Bioconcentration factor (BCF): 4</p> <p>N/A</p> <p>An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.</p> <p>Very toxic to aquatic life with long lasting effects.</p> <p>An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.</p> <p>Very toxic to aquatic life with long lasting effects.</p> <p>Do not allow material to be released to the environment without proper governmental permits.</p> <p>Do not allow product to reach ground water, water course or sewage system, even in small quantities</p> <p>Danger to drinking water if even extremely small quantities leak into the ground.</p> |
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13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

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| <p>Hazardous:</p> | <p>Hazardous as powder only.</p> |
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| <p>Hazard Class:</p> <p>Packing Group:</p> <p>UN Number:</p> <p>Proper Shipping Name:</p> | <p>6.1 Toxic substances</p> <p>III</p> <p>UN3288</p> <p>Toxic solid, inorganic, n.o.s. (Nickel (II) chloride)</p> |
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15. Regulatory Information

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| <p>Sec 302 Extremely Hazardous:</p> <p>Sec 304 Reportable Quantities:</p> <p>Sec 313 Toxic Chemicals:</p> | <p>No</p> <p>N/A</p> <p>Yes</p> |
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16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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| <p>Document Last Revised:</p> | <p>08/21/2019</p> |
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