## 1. Product and Company Identification

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| Trade Name: | Nickel (II) iodide |
| Chemical Formula: | $NiI_2$ |
| 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)<br>+1-703-527-3887 (International) |

## 2. Hazards Identification

Signal Word: Danger

Hazard Statements:
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 the lung, the kidneys and the liver through prolonged or repeated exposure. Route of exposure: inhalative.

Precautionary Statements:
P260: Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284: Wear respiratory protection
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P308+P313: IF exposed or concerned: Get medical advice/ attention.
P333+P313: If skin irritation or rash occurs: Get medical advice/ attention.
P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
P363: Wash contaminated clothing before reuse.
P405: Store locked up.
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

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

## 3. Composition

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| Chemical Family: | Salt |
| Additional Names: | Nickel diiodide |
| Nickel (II) iodide ($NiI_2$): | |
| Percentage: | 100 wt% |
| CAS #: | 13462-90-3 |
| EC #: | 236-666-6 |

## 4. First Aid Procedures

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| 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

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| 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

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| 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

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| Handling Conditions: | Avoid contact with skin and eyes. Wash thoroughly after handling. |
| Storage Conditions: | Store in a cool dry place in a tightly sealed container. Store away from water/moisture, oxidizing agents. Store in the dark. Store under inert gas. This product is moisture sensitive. Protect from humidity and water, exposure to light. 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, inhalable fraction, long-term value |
| 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: | Rubber gloves |
| 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 | Black |
| Form: | Powder, Granules, Pellets, Sputtering target, Custom parts |
| Odor: | Odorless |
| Water Solubility: | 1,242 g/l |
| Boiling Point: | N/A |
| Melting Point: | 797°C |
| Flash Point: | N/A |
| Autoignition Temperature: | N/A |
| Density: | 5.83 g/cc |
| Molecular weight: | 312.51 g/mol |

## 10. Reactivity

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| Stability: | Stable under recommended storage conditions |
| Reacts With: | Oxidizing agents, bases, strong acids, alkali metals, alkaline earth metals |
| Incompatible Conditions: | Light, water/moisture |
| Hazardous Decomposition Products: | Metal oxide fume, hydrogen iodide, iodine, nickel/nickel oxides |

## 11. Toxicological Information

Potential Health Effects:

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| Eyes: | May cause irritation |
| Skin: | May cause an allergic skin reaction. |
| Ingestion: | May cause irritation |
| Inhalation: | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Chronic: | Causes damage to the lung, the kidneys and the liver through prolonged or repeated exposure. Route of exposure: inhalative. Prolonged exposure to iodides may produce skin rash, running nose, headache and irritation of the mucous membranes. In severe cases the skin may show pimples, boils, redness, black and blue spots, hives and blisters. Iodides are readily diffused across the placenta. Nickel and nickel compounds may cause a form of dermatitis known as nickel itch. They may also cause intestinal disorders, convulsions and asphyxia. Airborne nickel contaminated dusts are regarded as carcinogenic to the respiratory tract. |

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| Signs & Symptoms: | N/A |
| Aggravated Medical Conditions: | N/A |
| Median Lethal Dose: | N/A |
| Carcinogen: | May cause cancer.<br>IARC: 1 - Group 1: Carcinogenic to humans (Nickel (II) iodide) |

NTP: Known to be human carcinogen (Nickel (II) iodide)
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

## 12. Ecological Information

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| Aquatic Toxicity: | N/A |
| Persistent Bioaccumulation Toxicity: | N/A |
| Very Persistent, Very Bioaccumulative: | N/A |
| Notes: | Very toxic to aquatic organisms.<br>Do not allow material to be released to the environment without proper governmental permits.<br>Do not allow product to reach ground water, water course or sewage system, even in small quantities.<br>Avoid transfer into the environment.<br>Danger to drinking water if even extremely small quantities leak into the ground.<br>Also poisonous for fish and plankton in water bodies.<br>May cause long lasting harmful effects to aquatic life. |

## 13. Disposal Considerations

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

## 14. Transportation Data

Hazardous: Hazardous as powder only.


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| Hazard Class: | 8 Corrosive substances |
| Packing Group: | II |
| UN Number: | UN3260 |
| Proper Shipping Name: | Corrosive solid, acidic, inorganic, n.o.s. (Nickel (II) iodide) |

## 15. Regulatory Information

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| Sec 302 Extremely Hazardous: | No |
| Sec 304 Reportable Quantities: | N/A |
| Sec 313 Toxic Chemicals: | Yes |

## 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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