

## SECTION 1: PRODUCT & COMPANY IDENTIFICATION

### 1.1 Product Identifiers

Product Description: Lithium Indium Chloride ( $\text{Li}_3\text{InCl}_6$ ) powder

CAS Number: The CAS number is unknown or has not been assigned to this material

### 1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Identified Uses: Scientific research and development (solid electrolyte material for Li-ion batteries)

### 1.3 Details of the Supplier of the Safety Data Sheet

Company: NEI Corporation

Address: 400 Apgar Drive, Unit E – Somerset, NJ 08873 – USA

Phone: +1 (732) 868-3141 Fax: +1 (732) 868-3143

Email: productinfo@neicorporation.com

### 1.4 Emergency Telephone Number

Manufacturer: +1 (732) 868-3142 (9am to 6pm EST / UTC -0500)

U.S. Poison Control Center: +1-800-222-1222

ChemTel (North America): +1 (800) 255-3924 (during transportation only)

ChemTel (International): +1 (813) 248-0585 (during transportation only – collect calls accepted)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the Substance or Mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302

Skin corrosion (Category 1C), H314

Serious eye damage (Category 1), H318

Specific target organ toxicity - repeated exposure, Inhalation (Category 1), Lungs, H372

Short-term (acute) aquatic hazard (Category 2), H401

### 2.2 Label Elements

GHS Label Elements, including precautionary statements

Pictogram(s):



Signal Word: Danger

#### Hazard Statement(s):

H302 Harmful if swallowed

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

H372 Causes damage to organs (Lungs) through prolonged or repeated exposure if inhaled.

H401 Toxic to aquatic life

#### Precautionary Statement(s):

P233 Keep container tightly closed

P260 Do not breathe dust / fume / gas / mist / vapors / spray

P262 Do not get in eyes, on skin, or on clothing

P280 Wear protective gloves, protective clothing, & eye protection

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P310 Immediately call a POISON CENTER or doctor/physician.

## Lithium Indium Chloride ( $\text{Li}_3\text{InCl}_6$ ) powder

P363 Wash contaminated clothing before reuse.

P273 Avoid release to the environment.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Substances

| Component   | Formula                           | Synonyms                    | CAS #   | Wt. % |
|---|-----------------------------------|-----------------------------|---------|-------|
| Lithium Indium Chloride   | Li <sub>3</sub> InCl <sub>6</sub> | Lithium Indium Hexachloride | unknown | 100 % |
| Hazard Classifications: see section 2 for full hazard classifications |                                   |                             |         |       |

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of First Aid Measures

#### General Advice:

Move out of exposed area. Seek medical attention if irritation occurs. Show this SDS to the doctor in attendance.

#### After Inhalation:

If breathed in, move person into fresh air. If not breathing, give artificial respiration and seek medical attention.

#### After Skin Contact:

Immediately remove all contaminated clothing. Rinse skin with water or shower. Seek medical attention.

#### After Eye Contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing and seek medical attention if irritation occurs.

#### After Swallowing:

Never give anything by mouth to an unconscious person. Rinse mouth with water. Do NOT induce vomiting. Seek immediate medical attention.

### 4.2 Most Important Symptoms and Effects, Both Acute and Delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

### 4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

No further relevant information available

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### 5.2 Hazardous Combustion Products

Hydrogen chloride gas, Lithium oxides, Indium oxides; not combustible; ambient fire may liberate hazardous vapors.

### 5.3 Advice for Firefighters

Wear self-contained breathing apparatus for firefighting and full protective suit

### 5.4 Other Information

No further relevant information available

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

Use personal protective equipment. Avoid generation and inhalation of dust in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

### 6.2 Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3 Methods and Materials for Containment and Cleaning Up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dust.

## Lithium Indium Chloride (Li<sub>3</sub>InCl<sub>6</sub>) powder

#### 6.4 Reference to Other Sections

For safe handling, see Section 7; for personal protection, see Section 8; for disposal, see Section 13.

### SECTION 7: HANDLING AND STORAGE

---

#### 7.1 Precautions for Safe Handling

Handle in a controlled environment, such as a dry room or glove box. Appropriate personal protective equipment should be used at all times. Avoid contact with eyes and skin. Do not inhale substance/mixture. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For additional precautions, see section 2.2.

#### 7.2 Conditions for Safe Storage (including any incompatibilities)

Keep container tightly sealed, in a cool, dry place. This material is hygroscopic. Keep away from moisture and acids. Store in a locked cabinet or with access restricted to technical experts or their assistants. Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

#### 7.3 Specific End Uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

### SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

---

#### 8.1 Control Parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure Controls

##### Appropriate Engineering Controls

Handle in accordance with good industrial hygiene and safety practice. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

##### Personal Protective Equipment

Eye / Face Protection:

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection:

Handle with impervious gloves (nitrile rubber, 0.11 mm thick). Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash & dry hands.

Body Protection:

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection:

Recommended Filter type: Filter type P2

##### Control of Environmental Exposure

Do not let product enter drains.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

---

#### 9.1 Information on Basic Physical and Chemical Properties

|                      |                |
|----------------------|----------------|
| Form:                | Solid (powder) |
| Color:               | Off white      |
| Odor:                | Not determined |
| pH:                  | Not determined |
| Melting point/range: | Not determined |
| Specific Gravity:    | Not determined |
| Density (20 °C):     | Not determined |
| Viscosity (20 °C):   | Not determined |
| Boiling Point:       | Not determined |

#### Lithium Indium Chloride (Li<sub>3</sub>InCl<sub>6</sub>) powder

Flashpoint: Not determined  
 Ignition Temperature: Not determined  
 Auto-ignition Temperature: Not determined  
 Lower Explosion Limit: Not determined  
 Upper Explosion Limit: Not determined  
 Vapor Pressure: Not determined  
 Vapor Density: Not determined  
 Water Solubility: Not determined  
 Evaporation Rate: Not determined

**9.2 Other Information**

No further relevant information available

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity**

No information known

**10.2 Chemical Stability**

Stable under recommended storage conditions (see Section 7.2)

**10.3 Possibility of Hazardous Reactions**

Exothermic reaction with alkali metals, halogen-halogen compounds; Violent reactions possible with strong acids.

**10.4 Conditions to Avoid**

Exposure to moisture

**10.5 Incompatible Materials**

Strong acids

**10.6 Hazardous Decomposition Products**

In the Event of Fire, see Section 5

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on Toxicological Effects**

**Acute Toxicity**

| Component               | Oral LD50         | Dermal LD50       | Inhalation LC50   |
|-------------------------|-------------------|-------------------|-------------------|
| Lithium Indium Chloride | No data available | No data available | No data available |

**Skin corrosion/irritation**

Causes severe skin burns

**Serious eye damage/eye irritation**

Causes serious eye damage

**Respiratory or skin sensitization**

No Data Available

**Germ cell mutagenicity**

No Data Available

**Carcinogenicity**

No classification data on carcinogenic properties of this material is available from EPA, IRAC, NTP, OSHA or ACGIH.

**Reproductive Toxicity**

No Data Available

**Teratogenicity**

No Data Available

**Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System)**

No Data Available

**Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System)**

Causes damage to organs (Lungs) through prolonged or repeated exposure if inhaled.

**Aspiration Hazard**

No Data Available

**Additional Information**

To the best of our knowledge, the chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

---

**SECTION 12: ECOLOGICAL INFORMATION**

**12.1 Toxicity**

No Data Available

**12.2 Persistence and Degradability**

No Data Available

**12.3 Bioaccumulative Potential**

No Data Available

**12.4 Mobility in Soil**

No Data Available

**12.5 Results of PBT and vPvB Assessment**

PBT/vPvB assessment not available as chemical safety assessment not conducted / required.

**12.6 Other Adverse Effects**

Harmful to aquatic life with long lasting effects. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

---

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste Treatment Methods – Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**13.2 Waste Treatment Methods – Contaminated Packaging**

Dispose of properly as you would with unused product.

---

**SECTION 14: TRANSPORT INFORMATION**

**14.1 Department of Transportation (DOT - US)**

**UN number:** 3260

**Class:** 8

**Packing Group:** III

**Proper Shipping Name:** Corrosive solid, acidic, inorganic, n.o.s. (Lithium Indium Chloride)

**14.2 International Maritime Dangerous Goods (IMDG)**

**UN number:** 3260

**Class:** 8

**Packing Group:** III

**Proper Shipping Name:** Corrosive solid, acidic, inorganic, n.o.s. (Lithium Indium Chloride)

**14.3 International Air Transport Association (IATA)**

**UN number:** 3260

**Class:** 8

**Packing Group:** III

**Proper Shipping Name:** Corrosive solid, acidic, inorganic, n.o.s. (Lithium Indium Chloride)

**14.4 Additional Transport Information**

**HS Code:** 2805.19

**Schedule B:** 2805.19.9000

Air Excepted Quantities (E1): 30g (max net per inner packaging) / 1kg (max net per outer packaging)

Ground Limited Quantities (173.154): ≤ 5 kg (11 lbs) net capacity each for solids

---

**Lithium Indium Chloride (Li<sub>3</sub>InCl<sub>6</sub>) powder**

---

**SECTION 15: REGULATORY INFORMATION**

**15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture**

No Data Available

**15.2 Chemical Safety Assessment**

A chemical safety assessment was not carried out for this product.

---

**SECTION 16: OTHER INFORMATION**

**REACH Number**

A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

**Further Information**

NEI has attempted to provide current and accurate information to the best of its knowledge. NEI makes no representations regarding the accuracy or completeness of the information and assumes no liability for any loss, damage, injury of any kind which may result from or arise out of the use of or reliance on the information by any person. Employers should use this information only as a supplement to other information gathered by them and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

– END OF SDS –