1. Identification of the substance/mixture and of the company/undertaking

- **Product Identifier** – LX-112
- **Article Number** - 21310-21313
- **CAS Number** [25038-04-4]

Relevant identified uses of the substances or mixture and uses advised against.
Laboratory chemicals. Manufacture of substances.

- **Application of the substance/preparation:** No further relevant information.
- **Details of the supplier of the safety data sheet**

  Ladd Research
  83 Holly Court
  Williston, VT 05495
  sales@laddresearch.com
  Tel: +1-(802) 658-4961
  Emergency Tel: +1-703-741-5500 (Chemtrec)

2. Hazards identification

- **Classification of the substance or mixture**

- **Classification according to Regulation (EC) No 1272/2008**

  - GHS08 health hazard
  
  Resp. Sens. 1    H334    May cause allergy or asthma symptoms or breathing difficulties if inhaled.

  - GHS07

  Skin Irrit. 2    H315    Causes skin irritation.
  Eye Irrit. 2    H319    Causes serious eye irritation.
  STOT SE 3    H335    May cause respiratory irritation.

**Label elements**

**Labelling according to Regulation (EC) No 1272/2008:**
The substance is classified and labelled according to the CLP regulation.

**Hazard pictograms**

- GH07
- GH08
Signal word  Danger

Hazard statements
H315   Causes skin irritation
H319   Causes serious eye irritation
H334   May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335   May cause respiratory irritation

Precautionary statements
P261   Avoid breathing dust/fume/gas/mist/vapors/spray
P280   Wear protective gloves/eye protection/face protection
P284   [In case of inadequate ventilation] wear respiratory protection
P305+P351+P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405   Store locked up.
P501   Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards
PBT: Not applicable
vPvB: Not applicable

3. Composition/information on ingredients

   Chemical characterization: Substances
   CAS No.  Description
   25038-04-4  LX-112 Resin

4. First aid measures

   Description of first aid measures
   General information:
   Consult a physician. Show this safety data sheet to the doctor in attendance.
   After inhalation:
   No adverse effects are anticipated from inhalation. If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
   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:
   Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
   Information for doctor:
   Most important symptoms and effects, both acute and delayed
   No further relevant information available.
   Indication of any immediate medical attention and special treatment needed
   No further relevant information available.
5. **Firefighting measures**

   **Extinguishing media**
   - Flash point: 106°C
   - Auto-ignition point: 270°C

   **Suitable extinguishing agents:**
   Use fire extinguishing methods suitable to surrounding conditions. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

   **Special hazards arising from the substance or mixture.** Carbon oxides, Hydrogen chloride gas

   **Advice for firefighters**
   Keep containers tightly closed. Closed containers may rupture when exposed to extreme heat. Use water spray to keep fire exposed containers cool.

   **Protective equipment:** Wear self-contained breathing apparatus for firefighting if necessary.

6. **Accidental release measures**

   **Personal precautions, protective equipment and emergency procedures**
   Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe area.

   **Environmental precautions:**
   Do not allow product to reach sewage system, drains or any water course.

   **Methods and material for containment and cleaning up:**
   Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation. Keep in suitable, closed containers for disposal.

   **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.

7. **Handling and storage**

   **Handling:**
   - **Precautions for safe handling**
     Ensure good ventilation/exhaust at the workplace. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Normal measures for preventive fire protection.

   - **Information about fire and explosion protection:** Keep respiratory protective device available.

   - **Conditions for safe storage, including any incompatibilities**
     Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

   **Storage:**
   - **Requirements to be met by storerooms and receptacles:** Store in a cool location.
   - **Information about storage in one common storage facility:** Not required.
   - **Further information about storage conditions:** Keep container tightly sealed.
   - **Special end use(s):** No further relevant information available.
8. **Exposure controls/personal protection**
   
   **Additional information about design of technical facilities:** No further data; see item 7.
   
   **Control parameters**
   
   **Ingredients with limit values that require monitoring at the workplace:** Not required.
   
   **Additional information:** The lists valid during the making were used as basis.
   
   **Exposure controls:**
   
   **Personal protective equipment:**
   
   **General protective and hygienic measures:**
   Keep away from foodstuffs, beverages and feed.
   Remove all soiled and contaminated clothing.
   Wash hands before breaks and at the end of work.
   Store protective clothing separately.
   Avoid contact with the eyes and skin.
   Handle in accordance with good industrial hygiene and safety practice. In case of intensive or longer exposure, use self-contained respirator protective device.
   
   **Respiratory protection:**
   In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respirator 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.
   
   **Full contact**
   Material: Nitrile rubber
   Minimum layer thickness: 0.11mm
   Break through time: 480 minutes
   
   **Splash contact**
   Material: Nitrile rubber
   Minimum layer thickness: 0.11mm
   Break through time: 480 minutes
   
   **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.
   
   **Eye protection**
   Tightly sealed goggles
   
   **Body protection:**
   Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
   
   **Limitation and supervision of exposure into the environment** Do not let product enter drains.
9. Physical and chemical properties

Information on basic physical and chemical properties

General information

Appearance:
- Form: Viscous
- Color: Light yellow

Odor:
- Characteristic epoxy odor

Odor threshold:
- Not determined

pH value:
- Not determined

Change in condition
- Melting point/Melting range: Undetermined
- Boiling point/Boiling range: Undetermined

Flash point:
- 106°C

Flammability:
- Not applicable

Ignition temperature:
- Decomposition temperature: Not determined

Self-igniting:
- Not determined

Danger of explosion:
- Product does not present an explosion hazard

Explosion limits:
- Lower: Not determined
- Upper: Not determined

Vapor pressure at 20°C:
- Not determined

Density at 20°C:
- 1.22 g/cm³

Relative density:
- Not determined

Vapor density:
- Not determined

Evaporation rate:
- Not determined

Solubility in:
- Miscibility with water: 30 g/l

Partition coefficient:
- Not determined

Viscosity:
- Dynamic: Not determined
- Kinematic: Not determined

Other information:
- No further relevant information available

10. Stability and reactivity

Reactivity
- No further relevant information available

Chemical stability
- Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.

Possibility of hazardous reactions:
- No dangerous reactions known.

Conditions to avoid:
- Heat

Incompatible materials:
- Strong oxidizing agents.

Hazardous decomposition products:
- No dangerous decomposition products known.
11. **Toxicological information**

    Information on toxicological effects

    **Acute toxicity:** Based on available data, the classification criteria are not met.

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

    111-30-8 glutaral

    Oral   LD50  500 mg/kg (rat)
    Dermal  LD50  >12,000 mg/kg (rabbit)

    **Primary irritant effect:**

    on the skin: Causes skin irritation.

    on the eye: Strong caustic effect.

    **Respiratory or skin sensitization**

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

    **Additional toxicological information:**

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

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

    Germ cell mutagenicity: Based on available data, the classification criteria are not met.

    Carcinogenicity: Based on available data, the classification criteria are not met.

    Reproductive toxicity: Based on available data, the classification criteria are not met.

    **STOT-single exposure:** May cause respiratory irritation.

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

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

12. **Ecological information**

    **Toxicity**

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

    **Persistence and degradability:** No further relevant information available.

    **Behavior in environmental systems:**

    **Bioaccumulative potential:** No further relevant information available.

    **Mobility in soil:** No further relevant information available.

    **Additional ecological information:**

    **General notes:**

    Water hazard class 1 (German regulation)(Self-assessment): slightly hazardous for water.

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

    **Results of PBT and vPvB assessment**

    PBT: Not applicable

    vPvB: Not applicable.

    **Other adverse effects:** No further relevant information available.
13. **Disposal considerations**

*Waste treatment methods*

**Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Recommendation:** Disposal must be made according to official regulations.

14. **Transport information**

**UN-Number**

ADR, AND, IMDG, IATA: Void

**UN proper shipping name**

Not dangerous goods

ADR, AND, IMDG, IATA

**Transport hazard class(es)**

ADR, AND, IMDG, IATA: Void

**Class**

Void

**Packing group**

ADR, IMDG, IATA: Void

**Environmental hazards:**

Marine pollutant: No

**Special precautions for user:** Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

**UN “Model Regulation”:** Void

15. **Regulatory information**

Safety, health and environmental regulations/legislation specific for the substance or mixture.

**Directive 10112/18/EU**

**Named dangerous substances – ANNEX I:** Substance is not listed

**Regulation (EC) No 1907/2006 ANNEX XVII:** Conditions of restriction: 3

**Chemical safety assessment:** A chemical safety assessment has not been carried out.
16. **Other Information**

This information is based on our present knowledge and should assist the user with the safe handling of this material when properly applied. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Contact**

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**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 Harmonized System of Classification and Labelling of Chemicals
- **EINECS:** European Inventory of Existing Commercial Chemical Substances
- **ELINCS:** European List of Notified 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