Safety data sheet:  **LITHIUM Densifier LD 44**

*According to 1907/2006/EC, Article 31 Interior & Exterior*

**Inorganic binder for the consolidation and conservation of porous and artificial stone.**

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

<table>
<thead>
<tr>
<th>Product identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade name: <em>Lithium Densifier LD 44</em></td>
</tr>
</tbody>
</table>

**Relevant identified uses of the substance or mixture and uses advised against**

**Application of the substance / the preparation**
- inorganic binder / adhesive for industrial applications

**Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**
- isi GmbH
- Ilgner – Schleif – Innovationen GmbH
- D-51598 Friesenhagen - Steeg
- Telefon 0049/2294/993818 - 0
- Telefax 0049/2294/993818-30
- Further information obtainable from: mail@ilgner-schleif-innovationen.com
- Emergency telephone number: Tel.: 0049/30/19240

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2 **Hazards identification**

**Classification of the substance or mixture**

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

![GHS07]

Eye Irrit. 2 H319 Causes serious eye irritation.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

![Xi; Irritant]

R36: Irritating to eyes.

**Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

**Label elements**

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

**Hazard pictograms**

![GHS07]

**Signal word Warning**
Hazard-determining components of labelling:
Silicic acid, lithium salt

Hazard statements
H319 Causes serious eye irritation.

Precautionary statements
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P262 Do not get in eyes, on skin, or on clothing.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:
CAS: 12627-14-4 Silicic acid, lithium salt 25 - 50%
EINECS: 235-730-0 Xi R36

Additional information
For the wording of the listed risk phrases refer to section 16.

4 First aid measures

Description of first aid measures
General information Immediately remove any clothing soiled by the product.
After skin contact Immediately rinse with water.
After eye contact Rinse opened eye for several minutes under running water.
After swallowing Rinse out mouth and then drink plenty of water.
Call a doctor immediately.

5 Firefighting measures

Extinguishing media
Suitable extinguishing agents
Product itself is not combustible; define extinguishing measures according to neighbouring conditions.
Advice for firefighters
Protective equipment: No special measures required.
### 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

- Particular danger of slipping on leaked/spilled product.

**Environmental precautions:**

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

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

- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**Reference to other sections**

See Section 8 for information on personal protection equipment.

### 7 Handling and storage

**Handling**

- Precautions for safe handling

  - No special precautions are necessary if used correctly.

- Information about fire - and explosion protection: No special measures required.

- Conditions for safe storage, including any incompatibilities

  - Storage Requirements to be met by storerooms and receptacles:
    - Provide alkali-resistant floor.
    - Do not use light alloy receptacles.
    - Suitable material for receptacles and pipes: steel or stainless steel.
    - Unsuitable material for receptacle: aluminium.
    - Unsuitable material for receptacle: glass or ceramic.
    - Unsuitable material for receptacle: zinc.

- Information about storage in one common storage facility:

  - Do not store together with acids.

- Further information about storage conditions: Protect from frost.

### 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.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Avoid contact with the eyes and skin.
Respiratory protection: Not required.
Protection of hands: Alkaline resistant gloves
Material of gloves
Natural Latex with small amount of polychloroprene Latex. (Lapren, Company KCL)
Penetration time of glove material
Value for the permeation: Level \( \geq 6 \)
Indications are based on information by the producer of the gloves resp. literature or derived from similar substances by analogy.
Eye protection:

 Tighty sealed goggles.

Body protection: Alkaline resistant protective clothing

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
Form: Fluid
Colour: Opaque
Odour: Odourless
pH-value at 20°C: ca. 12.5
Change in condition
Boiling point/Boiling range: > 100°C
Flash point: Not applicable
Self-igniting: Product is not selfigniting.
Danger of explosion: Product does not present an explosion hazard.
Density at 20°C: ca. 1.26 g/cm3
Solubility in / Miscibility with Water: Fully miscible
Viscosity: dynamic at 20°C: ca. 20

10 Stability and reactivity

Reactivity
Chemical stability
Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
Possibility of hazardous reactions
Strong exothermic reaction with acids
Reacts with light alloys to form hydrogen
Hazardous decomposition products: No dangerous decomposition products known
11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values relevant for classification:
12627-14-4 Silicic acid, lithium salt, mole ratio > 1.6 < 2.6
Oral LD50 > 2000 mg/kg (rat)
Primary irritant effect:
on the skin: Irritant to skin and mucous membranes.
on the eye: Strong irritant with the danger of severe eye injury.
Sensitization: No sensitizing effects known.
Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
Irritant

12 Ecological information

Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability
Other information:
Readily eliminable from water.
Inorganic product; biotic degradation not applicable.
Ecotoxic effects:
Remark: No toxicity after neutralization.
Behaviour in sewage processing plants:
The product is an alkaline solution. Neutralization is normally necessary before a waste water is discharged into sewage treatment plants.
Additional ecological information:
General notes:
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

13 Disposal considerations

Waste treatment methods
Recommendation
Can be disposed off with rumble after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
European waste catalogue
Waste catalogue numbers are to be defined according to EWC-Directive, specially for application sectors.
Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agents: Water, if necessary together with cleansing agents.

14 Transport information

Land transport ADR/RID (cross-border)
ADR/RID class: ---
Maritime transport IMDG: ---
IMDG Class: ---
Marine pollutant: No
Air transport ICAO-TI and IATA-DGR: ---
ICAO/IATA Class: ---
UN "Model Regulation": ---
Special precautions for user Not applicable.

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulations
Water hazard class: water hazard class 1: slightly hazardous for water
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The product is designed exclusively for professional/industrial application (see product information). This information is based on our level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Relevant phrases
H319 Causes serious eye irritation.
R36 Irritating to eyes.

Department issuing MSDS: Laboratory
Contact: Thomas Ilgner / Anis Saad

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)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
LC50: Lethal concentration, 50 percent