

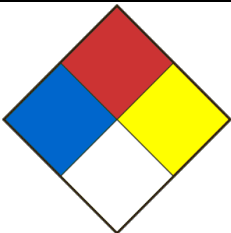


## SAFETY DATA SHEET

### SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

|                                                                                                                 |                                                                       |                                             |                       |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------|-----------------------|
| Product Identifier<br>LITHIUM HYDROXYDE                                                                         |                                                                       | Product Use<br>Laboratory use               |                       |
| Chemical formula<br>LiOH                                                                                        |                                                                       | Product code<br>LP-0118                     | Molar weight<br>23,95 |
| Chemical name / Commercial name / Synonymous<br>Lithium hydroxide; Lithium hydrate; Lithium hydroxide anhydrous |                                                                       |                                             |                       |
| Supplier's name<br>Laboratoire MAT                                                                              |                                                                       | Address-Street<br>610, Adanac Street        |                       |
| City<br>Québec                                                                                                  |                                                                       | Province<br>Québec                          |                       |
| Postal code<br>G1C 7B7                                                                                          | Internet<br>www.labmat.com                                            | Phone number<br>418-660-8666 Lun-Ven 8h-16h |                       |
| Emergency phone                                                                                                 | 418-660-8666 Lun-Ven 8h-16h CENTRE ANTI-POISON DU QUÉBEC 800-463-5060 |                                             |                       |
| Date SDS<br>8/6/2024                                                                                            | SDS Prepared by<br>Laboratoire MAT                                    | E-Mail<br>labmat@labmat.com                 |                       |

## SECTION 02 - HAZARDS IDENTIFICATION

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Classification WHIMS / GHS</b>                                                   | Skin corrosion/irritation - Skin corrosion category 1B<br>Serious eye damage/eye irritation - Serious eye damage category 1<br>Acute toxicity - Oral category 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| <b>Signal Word</b>                                                                  | DANGER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| <b>Hazards statements (H)</b>                                                       | H302 Harmful if swallowed.<br>H314 Causes severe skin burns and eye damage.<br>H318 Causes serious eye damage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| <b>Precautionary statements (P)</b>                                                 | P260 Do not breathe mists, gases, vapors and other fumes, or the product itself.<br>P264 Wash the areas of the body that have been in contact with the product after handling.<br>P270 Do not eat, drink or smoke when using this product.<br>P280 Wear protective gloves, protective clothing and eye and face protection.<br>P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.<br>P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.<br>P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.<br>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.<br>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P310 Immediately call a POISON CENTER or a doctor.<br>P321 Specific treatment (see section 4 of the SDS and on this label).<br>P330 Rinse mouth.<br>P363 Wash contaminated clothing before reuse.<br>P405 Store locked up.<br>P501 Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company. |  |
| <b>PICTOGRAMS</b>                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| <b>Other dangers</b>                                                                | NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|  | <b>Health</b> 2<br><b>Fire</b> 0<br><b>Reactivity</b> 0<br><b>Special danger</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |

## SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

| Ingrédients (Dénomination chimique / synonymes) | Numéro CAS et tout identificateur unique | Concentration (%P/P) |
|-------------------------------------------------|------------------------------------------|----------------------|
| Hydroxyde de lithium                            | 1310-65-2                                | <=100                |

## SECTION 04 - FIRST AID MEASURES

|                                                                        |                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye contact</b>                                                     | Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. If irritation persists, seek medical attention.                                                                                                                                    |
| <b>Skin contact</b>                                                    | Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention.                                                                                                                                                             |
| <b>Inhalation</b>                                                      | Move the unwell person to the fresh air. If breathing is difficult, give oxygen. Consult a physician.                                                                                                                                                                                       |
| <b>Ingestion</b>                                                       | Do NOT induce vomiting. If the person is conscious, rinse the mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.                                                                                                                                 |
| <b>Most important symptoms and effects (acute and delayed)</b>         | Main symptoms of high exposure: Eye damage. Skin, eye and respiratory system irritation. Kidney damage. Diarrhea. Vomiting. Blurry vision. Vertigo. Convulsions. Tremors. Cyanosis (blue to black coloring of the skin and nails). Slurred speech. Neurological disorders. Ref. section 11. |
| <b>Immediate medical attention and special treatment, if necessary</b> | Treat according to symptoms. Show this sheet to the attending physician.                                                                                                                                                                                                                    |

## SECTION 05 - FIREFIGHTING MEASURES

|                                                                      |                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Flammability</b>                                                  | No                                                                                                                                                                                                                                                        |
| <b>Suitable extinguishing media</b>                                  | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.                                                                                                                                                                                  |
| <b>Unsuitable extinguishing media</b>                                | Data not available.                                                                                                                                                                                                                                       |
| <b>Hazardous combustion products</b>                                 | Hazardous combustion products formed under fire conditions: Lithium oxides.                                                                                                                                                                               |
| <b>Specific hazards of the dangerous product</b>                     | Closed containers exposed to fire can explode. May react violently with incompatible products (Ref Section 10).                                                                                                                                           |
| <b>Special protective equipment and precautions for firefighters</b> | Discard incompatible substances if this can be done without risk. Firefighters should be equipped with standard protective equipment, fireproof clothing, face mask, gloves, protective boots and, where appropriate, self-contained breathing apparatus. |

## SECTION 06 - ACCIDENTAL RELEASE MEASURES

|                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Methods and materials for containment and cleaning up / Personal precautions, protective equipment</b> | Evacuate personnel to safe areas. Ensure adequate ventilation. Eliminate all sources of inflammation. Use personal protective equipment. Pick up with a shovel or broom, taking care not to scatter dust. Do NOT use absorbents composed with minerals, clay, or cellulose. Dispose of residues in a container provided for the disposal of hazardous materials. Do not let product enter drains. Discharge into the environment must be avoided. |
|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## SECTION 07 - HANDLING AND STORAGE

|                                    |                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conditions for safe storage</b> | Keep container tightly closed in a dry and well-ventilated place. Store in cool place. Air sensitive. Protect from the sun's rays.                                                                                                                                                                                                                                                         |
| <b>Methods of handling</b>         | Avoid contact with the skin, eyes and clothes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust or vapor is formed. Avoid ingestion and inhalation. Wear personal protective equipment when handling. Always ensure good ventilation. Apply the usual standard hygiene rules: Wash your hands after use. Do not eat or drink during use. |

## SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

### Workplace control parameters

| Components        | CAS-No.   | Value | Control parameters  | Basis                                                                                            |
|-------------------|-----------|-------|---------------------|--------------------------------------------------------------------------------------------------|
| Lithium hydroxide | 1310-65-2 | C     | 1 mg/m <sup>3</sup> | Canada. British Columbia OEL                                                                     |
|                   |           | STEL  | 1 mg/m <sup>3</sup> | Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act. |

|                     |                                                                                                                                                                                                                                                                    |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data source         | Sigma-Aldrich.                                                                                                                                                                                                                                                     |
| Ventilation         | Fan.                                                                                                                                                                                                                                                               |
| Respiratory         | If work under the hood is not possible, or if the permissible levels are exceeded, use NIOSH cartridge respiratory protection, or an air-supplied respirator.                                                                                                      |
| Gloves              | Handle with gloves. Suggested material: Nitrile. Neoprene. PVC. The type, thickness and length of the glove must be chosen according to the use, the concentration of the product, as well as the duration of use. Replace gloves regularly for better protection. |
| Eyes                | Safety goggles with safety shutters.                                                                                                                                                                                                                               |
| Shoes               | Safety shoes.                                                                                                                                                                                                                                                      |
| Clothing            | Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.                                                                                                         |
| Engineering control | Have safety showers and eyewash stations in the workplace in case of an emergency and a ventilation system to maintain the level of concentrations in the air below the exposure limit values.                                                                     |

## SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

|                                       |                                        |
|---------------------------------------|----------------------------------------|
| Physical state                        | Solid.                                 |
| Appearance                            | Poudre blanche.                        |
| Odour                                 | Donnée non disponible.                 |
| Odour threshold                       | Data not available                     |
| pH                                    | 11 à 110-200g/L.                       |
| Melting point / Freezing point        | 450-471 °C°C                           |
| Initial boiling point                 | Data not available                     |
| Boiling range                         | Data not available                     |
| Flash point                           | Data not available                     |
| Evaporation rate                      | Data not available                     |
| Flammability                          | No                                     |
| Lower flammable / Explosive limit     | Data not available                     |
| Upper flammable / Explosive limit     | Data not available                     |
| Vapour pressure                       | Data not available                     |
| Vapour density                        | Data not available                     |
| Relative density                      | 1.5g/cm <sup>3</sup>                   |
| Solubility                            | soluble dans l'eau ~110-130g/L à 20°C. |
| Partition coefficient water/n-octanol | Data not available                     |
| Auto-ignition temperature             | Data not available                     |
| Decomposition temperature             | 924°C                                  |
| Viscosity                             | Data not available                     |

## SECTION 10 - STABILITY AND REACTIVITY

|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactivity</b>                                                          | Basic product, reacts violently with strong acids. May react violently with incompatible substances.                                                                                                                                                                                                                                                                                                                                               |
| <b>Chemical stability</b>                                                  | Moisture sensitive.                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Possibility of hazardous reactions</b>                                  | Stable under normal conditions. May initiate polymerization reactions in polymerizable organic compounds, especially epoxides. May generate flammable and/or toxic gases with ammonium salts, nitrides, halogenated organics, various metals, peroxides, and hydroperoxides. May serve as a catalyst. Reacts when heated above about 84°C with aqueous solutions of reducing sugars other than sucrose, to evolve toxic levels of carbon monoxide. |
| <b>Conditions to avoid, including static discharge, shock or vibration</b> | This product quickly absorbs moisture from the air. Avoid excessive heat. Avoid contact with incompatible materials.                                                                                                                                                                                                                                                                                                                               |
| <b>Incompatible materials</b>                                              | Strong oxidizing agents (nitric acid, perchloric acid, peroxides, chlorates and perchlorates), strong acids, carbon dioxide, water, heat and humidity. Tin. Violent reactions in contact with the following products: Zinc. Aluminum. Ammonium salts. Peroxides. Nitrides. Halogenated organics. Some metals.                                                                                                                                      |
| <b>Hazardous decomposition products</b>                                    | Hazardous decomposition products formed under fire conditions. - Lithium oxides.                                                                                                                                                                                                                                                                                                                                                                   |

## SECTION 11 - TOXICOLOGICAL INFORMATION

### LITHIUM HYDROXYDE

|                                                  |                                                                                                                                                                                                                                                                        |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Routes of exposure</b>                        | Ingestion, inhalation, skin and eyes.                                                                                                                                                                                                                                  |
| <b>Acute exposition effects / symptoms:</b>      | By exposure route below.                                                                                                                                                                                                                                               |
| <b>- Eyes</b>                                    | Severe irritation and burning of the eye tissue that may lead to corneal ulceration and blindness.                                                                                                                                                                     |
| <b>- Skin</b>                                    | Severe irritation and tissue burn.                                                                                                                                                                                                                                     |
| <b>- Inhalation</b>                              | Toxic if inhaled. Spasms, irritation and inflammation of the nose, throat and lungs. Edema of the larynx and bronchi. Chemical pneumonitis and pulmonary edema that can lead to death.                                                                                 |
| <b>Acute toxicity (Ingestion)</b>                | Toxic if swallowed. Irritation and burning of the mouth, throat, esophagus and abdominal wall. Dysphagia, abdominal pain, liver and kidney damage, cramps, diarrhea, melena, hematemesis, headache, stupor, seizures, loss of consciousness, coma and may cause death. |
| <b>Chronic exposure effects / symptoms</b>       | Burning sensation, nervous disorder, liver, lung and kidney damage, chest pain, cough, dyspnea, laryngitis, headache, dizziness, asthenia, prostration, weight loss and loss of appetite, nausea and vomiting .                                                        |
| <b>DL50 (specify species and route of entry)</b> | LD50 Oral - Rat - 210 mg/kg. LD50 Dermal - Rat - 2000mg/kg.                                                                                                                                                                                                            |
| <b>CL50 (specify species and route of entry)</b> | LC50 Inhalation - Rat - 4h - 960 mg/m3.                                                                                                                                                                                                                                |

## SECTION 12 - ECOLOGICAL INFORMATION

|                                      |                                                                                                                                                                                                                                                                                           |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ecotoxicity</b>                   | Toxicity to fish: Static test: LC50 - Danio rerio (zebra fish) - 62mg/L - 96h. Toxicity to daphnia and other aquatic invertebrates: Static test EC50 - Daphnia magna (Water flea): 19.1 mg/L - 48h. Toxicity to algae: Static test EC50 - Pseudokirchneriella subcapitata - 87mg/L - 72h. |
| <b>Persistence and degradability</b> | Readily biodegradable.                                                                                                                                                                                                                                                                    |
| <b>Bioaccumulative potential</b>     | Data not available.                                                                                                                                                                                                                                                                       |
| <b>Mobility in soil</b>              | Probable mobility due to its solubility in water.                                                                                                                                                                                                                                         |
| <b>Other adverse effects</b>         | Data not available.                                                                                                                                                                                                                                                                       |

## SECTION 13 - DISPOSAL CONSIDERATIONS

|                               |                                                                                                                                                |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Waste Disposal Method</b>  | Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company. |
| <b>Contaminated Packaging</b> | Dispose of as unused product.                                                                                                                  |

## SECTION 14 - TRANSPORT INFORMATION

|                            |                        |
|----------------------------|------------------------|
| UN Number                  | 2680                   |
| UN Proper shipping name    | HYDROXYDE DE LITHIUM   |
| Transport hazard class(es) | 8 Corrosive substances |
| Packing group              | II                     |
| Limited quantity index     | 1kg                    |
| ERAP Index                 | -                      |
| Special precautions        | -                      |

## SECTION 15 - REGULATORY INFORMATION

|              |                                                                                                                                                                 |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WHIMS CANADA | Skin corrosion/irritation - Skin corrosion category 1B<br>Serious eye damage/eye irritation - Serious eye damage category 1<br>Acute toxicity - Oral category 4 |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|

## SECTION 16 - OTHER INFORMATION

### Further information

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

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