MATERIAL SAFETY DATA SHEET
LITOCRYSTAL

Update date: 10/01/2023

[Prepared in accordance with Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 on REACH]

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING.

1.1. Product Identifier.

LITOCRYSTAL.

1.2. Relevant identified uses of the substance or mixture and uses advised against.

Identified use: An agent used to recrystallize concrete for construction purposes.

Use advised against: Do not combine with other products, especially acidic ones. Anything other than recommended.

1.3. Details of the supplier of the safety data sheet.

Manufactured to order of the owner of the IGOCHEM™ trademark IGOSA Sp. z o. o.

Address:	Gliwicka 3, 40-079 Katowice, Poland
Tel:	+48 (32) 131 48 93
Email:	info@igochem.com

1.4. Emergency telephone number.

112 (general emergency number), 998 (fire brigade), 999 (medical emergency)

SECTION 2: HAZARD IDENTIFICATION.

2.1. Classification of the substance or mixture.(in accordance with Regulation (EC) No 1272/2008)

Adverse effects on human health: Skin Corr. 1A H314 Causes severe skin burns and eye damage

Harmful effects on the environment: not applicable.

2.2. Labelling elements.

Hazard pictograms:

Signal word:

Danger

Hazard statements:

H314 Causes severe skin burns and eye damage.

Contains: potassium methylsiliconate (CAS: 31795-24-1, EC: 250-807-9), lithium hydroxide monohydrate (CAS: 1310-66-3, EC: 215-183-4)

Precautionary statements:

Prevention:

P102 Keep out of reach of children.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:.

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

P310 Immediately call a POISON CENTER or doctor/physician.

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

Removal:

P501 Dispose of contents/container in accordance with local, regional, national and international regulations.

2.3. Other hazards.

Based on the available data, it is concluded that the mixture does not meet the PBT or vPvB criteria and does not contain any substances with endocrine disrupting properties.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS.

3.1. Substances.

The product is a mixture of the substances listed below and others which, in accordance with European Union law and national requirements, do not require mentioning in this section of the safety data sheet.

3.2. Mixtures.

	Potassium methylsiliconate	Lithium Hydroxide Monohydrate
Content %(m/m)	max 3.5	max 2.5
Classification (Regulation No. 1272/2008)	Skin Corr. 1A, H314; Eye Dam.1, H318	Skin Corr. 1A, H314; Acute Tox. 4, H302
Name and registration number	01-2119517439-34-xxxx	No data
EC No.	250-807-9	215-183-4
CAS No.	31795-24-1	1310-66-3

Index number	No data	No data
INCI name	No data	No data
Other ways of identification	No data	No data
Product Definition	No data	No data

The meaning of H phrases is given in section 16 of the safety data sheet.

SECTION 4: FIRST AID MEASURES.

4.1. Description of first aid measures.

Inhalation: Get medical attention immediately. Call a poison control center or physician. Remove or carry the victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

If the person is not breathing, is breathing irregularly, or has stopped, artificial respiration or oxygen should be administered by qualified personnel. If unconscious, place in the first aid position and call for medical assistance immediately. Provide open ventilation. Loosen tight clothing, such as a collar, tie, or belt.

Skin contact: Flush contaminated skin with plenty of water for at least 10 minutes. Remove contaminated clothing and shoes. If symptoms occur, seek medical advice. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact: Get medical attention immediately. Call a poison control center or physician. Rinse immediately with plenty of water, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present. Continue rinsing for at least 10 minutes. Chemical burns should be treated promptly by a physician.

Consumption: Get medical attention immediately. Call a poison control center or physician. Rinse mouth with water. Remove dentures, if present. Remove casualty to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give large quantities of water to drink. Stop if the exposed person feels nauseous, as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns should be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in the first aid position and get medical help immediately. Provide open ventilation. Loosen tight clothing, such as a collar, tie or belt.

Protection of first aiders: No action should be taken which involves any risk to any person unless specifically trained. If it is suspected that fumes are still present the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous for the person

providing rescue resuscitation to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it or wear gloves.

4.2. Most important symptoms and effects, both acute and delayed.

Inhalation: No data available.

Skin contact: Causes severe skin burns.

Eye contact: Causes serious eye damage.

Consumption: No data available.

4.3. Indications of any immediate medical attention and special treatment for the injured person.

Treat symptomatically. If large quantities have been ingested or inhaled, immediately contact a poison specialist. No specific treatment.

SECTION 5: FIREFIGHTING MEASURES.

5.1. Extinguishing media.

Proper: carbon dioxide, extinguishing powders, water spray.

Not suitable: Do not use water in a full stream.

5.2. Special hazards arising from the substance or mixture.

Hazardous thermal decomposition products: carbon monoxide and dioxide, toxic gases may be produced in case of incomplete combustion.

5.3. Information for the fire brigade.

Rapidly isolate the area by removing all persons from the vicinity of the incident if there is a fire. Isolate the affected area and keep bystanders and unauthorized persons away. Firefighters should wear appropriate protective equipment and self-contained breathing apparatus with a full-facepiece, positive-pressure mask. Basic protection during chemical incidents is provided by firefighter clothing (including helmets, safety boots and gloves) that complies with European Standard EN 469.

SECTION 6: ACCIDENTAL RELEASE MEASURES.

6.1 Personal precautions, protective equipment and emergency procedures.

For non-emergency personnel: No action shall be taken involving any personal risk unless specifically trained. Evacuate surrounding areas. Do not allow entry to unnecessary or unprotected personnel. Do not touch or walk through spilled material. Do not breathe vapour or mist. Ensure adequate ventilation. If ventilation is inadequate, wear an appropriate respirator. Put on appropriate personal protective equipment.

For those providing assistance: If special clothing is required to clean up a spill, refer to section 8 for information on inappropriate and unsuitable materials. See also information in section "For non-emergency personnel". Remove sources of ignition.

6.2. Environmental precautions.

Secure drains. Prevent entry into soil, ditches, sewers, navigable channels and/or groundwater. In the event of water, soil or air pollution, inform the appropriate services.

6.3. Methods and materials for containment and cleaning up.

Ways to prevent the spread of contamination: Stop leak if without risk. Move containers from spill area. Approach release downwind. Protect drains, water lines, and basement and confined area entrances. Remove sources of ignition.

Recommendations for eliminating contamination: Spilled material should be washed into a sewage treatment plant or as directed. Spilled material should be collected using non-flammable substances such as sand, earth, vermiculite, diatomaceous earth. Place in containers and dispose of in accordance with local regulations. Dispose of at a licensed waste disposal company.

Other information related to the spill/release: Not applicable

6.4. References to other sections.

Emergency contact information – Section 1.
Information on appropriate personal protective equipment – Section 8.
Information on additional waste treatment – section 13.

SECTION 7: HANDLING AND STORAGE.

7.1. Precautions for safe handling.

Recommendations for safe handling of the mixture: Wear appropriate personal protective equipment (see section 8). Do not breathe vapours or mist. Do not ingest. Keep out of reach of unauthorized persons. Do not allow contamination of soil and sewage system.

Avoid conditions and materials listed in section 10. Store in accordance with the recommendations given in section 7.2. Prevent the formation of static electricity. Do not use near sources of ignition, open flames, do not smoke.

Recommendations for general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is stored, handled and processed. Hands and face should be washed before eating, drinking and smoking.

Remove contaminated clothing and protective equipment before entering dining areas. See Section 8 for additional protective equipment information.

7.2. Conditions for safe storage, including information on any mutual inconvenience.

Store at temperatures between 5 and 30°C. Store in accordance with local regulations. Store in original container, away from sunlight; in a dry, cool and well-ventilated place; away from incompatible materials (see section 10), sources of heat, food and drink. Do not store in aluminium or other light metal containers. Store under lock and key. Keep container closed and tight until ready for use. Containers that have been opened must be resealed and kept upright to prevent leakage of the mixture. Do not store in unlabelled containers. Use appropriate containers to prevent environmental contamination.

7.3. Specific end use(s).

Not applicable.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

8.1. Control parameters.

Maximum allowable concentrations:

MAC and NDSCh: no data (according to the Regulation of the Minister of Family, Labor and Social Policy of 12 June 2018, Journal of Laws 2018, item 1286, as amended)

Recommendations for the procedure for monitoring the content of hazardous components in the air:

Regulation of the Minister of Health of 2 February 2011 on tests and measurements of harmful health factors in the work environment (Journal of Laws 2011, No. 33, item 166) PN-89/Z-01001/06 Air purity protection. Names, terms and units. Terminology concerning air quality tests at workplaces.

PN Z-04008-7:2002 Protection of air purity. Sampling. Principles of air sampling in the work environment and interpretation of results.

PN-EN-689: 2002 Workplace air – guidelines for the assessment of inhalation exposure to chemical agents by comparison with limit values and measurement strategy.

Note: When the concentration of the substance is established and known, the selection of personal protective equipment should be made taking into account the concentration of the substance present at a given workplace, the exposure time and the activities performed by the employee. In an emergency, if the concentration of the substance at the workplace is not known, use personal protective equipment of the highest
recommended protection class.

The employer is obliged to ensure that the appropriate personal protective equipment and work clothing and footwear have protective and functional properties and ensure their proper washing, maintenance, repair and disinfection. The recommended initial and periodic examinations of employees should be carried out in accordance with the Regulation of the Minister of Health and Social Welfare of 30 May 1996 on the conduct of medical examinations of employees, the scope of preventive health care for employees and medical certificates issued for the purposes provided for in the Labour Code (Journal of Laws No. 69/1996, item 332, as amended by Journal of Laws No. 37/2001, item 451)

Secondary Impact Levels:

No data available.

Levels at which impacts are expected:

No data available.

Recommended monitoring procedures:

If the product contains ingredients to which exposure is limited, personal monitoring, occupational environment monitoring or biological monitoring may be necessary to determine the effectiveness of ventilation or other means of controlling the need to use respiratory protection. Reference should

be made to European Standard EN 689 for methods of determining exposure to chemicals by inhalation and to national documentation providing guidance on methods for determining hazardous substances.

8.2. Exposure controls.

Individual protection measures, such as personal protective equipment:

Eye or face protection: Eye protection complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: tightly fitted

goggles.

Skin protection:

- Hand protection: Chemical resistant gloves should be worn whenever handling chemical products when a risk assessment indicates this is necessary. 4-8 hours (breakthrough time): Wear suitable gloves conforming to EN374.

- Other protective equipment: Depending on the task being performed, protective clothing appropriate to the potential risk and approved by a competent person before commencing work should be worn. Recommended: chemical resistant protective clothing. Before working with this product, select appropriate footwear and additional skin protection measures based on the risk of the task being performed. Recommended: appropriate protective footwear

Respiratory protection: A properly fitted, air-purifying or air-fed respirator complying with an approved standard should be worn when a risk assessment indicates this is necessary. The selection of the respirator should be based on known or expected exposure levels, the hazards of the product and the hazard limits of the selected respirator. Recommended: for longer or more severe exposure, a gas mask with an ABEK filter.

Technical protective measures: Where the user generates dust, gas, fume or mist, process barriers, local fume extraction or other engineering controls should be used to keep exposure levels below recommended statutory limits.

General recommendations: Avoid eye and skin contamination. Do not inhale gases, vapors, aerosols. Wash hands, forearms and face thoroughly after working with chemical products, before eating, smoking and using the toilet, and after finishing work. To

Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated clothing should be laundered before reuse. Ensure that eyewash stations and safety showers are close to the work area.

Environmental exposure control:

Emissions from ventilation systems and process equipment should be checked to determine compliance with environmental protection laws. In some cases, fume scrubbers, filters, or design modifications to the equipment will be necessary.

process, aimed at reducing emissions to acceptable levels.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

9.1. Information on basic physical and chemical properties.

State of matter:	Liquid
Color:	Colorless, opalescent
Smell:	Weak
Melting/freezing point (°C):	No data
Initial boiling point and boiling range (°C):	No data
Flammability of materials:	No data
Lower and upper explosive limits:	Not applicable
Flash point (°C):	No data
Autoignition temperature (°C):	No data
Decomposition temperature:	No data
pH (23°C):	12.0 - 13.0
Kinematic viscosity:	No data
Solubility in water:	Unlimited
Solubility in other solvents:	No data
Partition coefficient – n-octanol/water:	No data
Vapor pressure:	No data
Relative density (g/cm3, 23°C):	approx. 1.1
Relative vapor density:	No data
Particle Characteristics	Not applicable

9.2. Other information.

Not applicable.

SECTION 10: STABILITY AND REACTIVITY.

10.1. Reactivity.

The product is stable under recommended storage conditions.

10.2. Chemical stability.

The mixture is stable under normal conditions.

10.3. Possibility of hazardous reactions.

In recommended storage and use conditions, no dangerous reactions will occur. Avoid contact with aluminum, zinc, lead, tin and their alloys - hydrogen may be released, which creates an explosive mixture with air.

10.4. Conditions to avoid.

During storage, avoid temperatures outside the ranges given in section 7.

10.5. Incompatible materials.

Strong oxidizers; salts; ammonium acids; with aluminum, zinc and tin - reacts with the release of explosive hydrogen, with acids it reacts with the release of heat.

10.6. Hazardous decomposition products.

Hydrogen by reaction with metals, ammonia by reaction with ammonium salts.

SECTION 11: TOXICOLOGICAL INFORMATION.

11.1. Information on hazard classes defined in Regulation (EC) No 1272/2008.

Toxicity of components

	Potassium methylsiliconate (CAS: 31795-24-1, EC: 250-807-9)	Lithium Hydroxide Monohydrate (CAS: 1310-66-3, EC: 215-183-4)
Acute toxicity		
- alimentary canal:	LD50, oral, rat > 2000mg/kg	LD50, oral, rat > 3400mg/kg
- respiratory tract:	No data	No data
- acute toxicity after skin contact:	No data	No data
Skin corrosion/irritation:	Severe burns (rabbit)	Causes severe skin burns
Serious eye damage/eye irritation:	Severe burns (rabbit)	Causes serious eye damage

Respiratory and skin sensitisation:	Based on available data, the classification criteria for the mixture are not met.
Mutagenic effect on germ cells:	Based on available data, the classification criteria for the mixture are not met.
Carcinogenic effect:	Based on available data, the classification criteria for the mixture are not met.
Reproductive toxicity:	Based on available data, the classification criteria for the mixture are not met.
Specific target organ toxicity – single exposure:	Based on available data, the classification criteria for the mixture are not met.
Specific target organ toxicity – repeated exposure:	Based on available data, the classification criteria for the mixture are not met.
Aspiration hazard:	Based on available data, the classification criteria for the mixture are not met.

Information on likely routes of exposure:

Inhalation: No data available.

Consumption: No data available.

Skin contact: Causes severe skin burns.

Eye contact: Causes serious eye damage.

Symptoms related to physical, chemical and toxicological properties:

Inhalation: No data available.

Consumption: No data available.

Skin contact: Serious symptoms may include pain, redness, irritation, blisters.

Eye contact: Serious symptoms may include pain, tearing, and redness.

Delayed immediate and chronic effects from short and long term exposure:

No data available.

Effects of interaction:

No data available.

11.2. Information about other threats.

Endocrine disrupting properties:

No data available.

Other information: No data available.

SECTION 12: ECOLOGICAL INFORMATION.

12.1. Toxicity.

No reports of adverse effects or critical hazards.

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 the PBT and vPvB assessment.

No data available.

12.6. Endocrine disrupting properties.

No data available.

12.7. Other harmful effects.

No reports of adverse effects or critical hazards.

SECTION 13: WASTE CONSIDERATIONS.

13.1. Waste disposal methods.

Act of 14 December 2012 on waste (Journal of Laws of 2013, item 21), as amended.
Act of 13 June 2013 on packaging and packaging waste management (Journal of Laws 2013, item 888).
Regulation of the Minister of the Environment of 9 December 2014 on the waste catalogue (Journal of Laws 2014, item 1923).

Waste disposal

The waste code must be assigned individually at the place of waste generation depending on the industry of the place of use.
Product waste should be recovered first. Waste that cannot be recovered should be neutralized (subjected to biological, physical or chemical transformation processes; stored). Only waste that cannot be neutralized in any other way for technological reasons or is not justified for ecological or economic reasons should be stored. Waste recovery and neutralization may only take place in a designated place in installations or devices that meet the appropriate requirements, in accordance with applicable regulations. Disposal of this product, solutions or derivatives should always comply with the requirements of environmental protection and legislation related to waste disposal, including the requirements of local authorities. Significant quantities of the product should not be discharged into the sewage system. Prevent waste from entering sewage.

Handling contaminated packaging

The generation of waste should be avoided or minimised wherever possible. Packaging waste should be recycled. Incineration or landfilling should only be considered where recycling is not possible.

SECTION 14: TRANSPORT INFORMATION.

14.1. UN number (UN number).

UN number: 1760

14.2. UN proper shipping name.

CORROSIVE LIQUID, NOS (contains potassium methyl silicone)

14.3. Transport hazard class(es).

Class 8; classification code C9; hazard identification number: 80; warning label: 8, tunnel restriction code: E.

14.4. Packing group.

II.

14.5. Environmental hazards.

The mixture does not constitute a hazard to the environment according to the criteria of the UN Model Regulations.

14.6. Special precautions for users.

Not applicable.

14.7. Transport in bulk in accordance with Annex II to MARPOL 73/78 and the IBC Code.

Not applicable.

SECTION 15: REGULATORY INFORMATION.

15.1. Safety, health and environmental regulations specific to the substance and mixture.

- Regulation (EC) No 1907/2006 (REACH) and subsequent amendments.
- Regulation (EC) No 1272/2008 (CLP/GHS) and subsequent amendments.
- Act of 25 February 2011 on chemical substances and their mixtures (Journal of Laws No. 63, item 322, as amended).
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).

15.2. Chemical safety assessment.

The supplier has not performed a chemical safety assessment for the mixture.

SECTION 16: OTHER INFORMATION.

Changes

General update

Abbreviations and acronyms used in the document

CLP - Classification, Labelling and Packaging Regulation

INCI - a naming system aimed at standardizing the naming of cosmetic ingredients

LC50 - lethal concentration 50%

LD50 - lethal dose 50%

OEL - maximum allowable concentration

OELCh - the highest allowable momentary concentration

NDSP - highest permissible ceiling (threshold) concentration

CAS number - a numerical designation assigned to a chemical substance by the Chemical Abstracts Service (CAS), allowing the identification of the substance.

EC number - the number assigned to a chemical substance in the European Inventory of Existing Commercial Chemical Substances (EINECS), or the number assigned to a substance in

the European List of Notified Chemical Substances (ELINCS), or the number in the list of chemical substances listed in the publication "No-longer polymers".

PBT - Persistence, Accumulation and Toxicity

STEL – momentary maximum allowable concentration

TWA – 8-hour mean allowable concentration

REACH - Registration, Evaluation and Authorization of Chemicals

vPvB - high persistence, high bioaccumulation potential

Literature and other data sources used

- safety data sheets provided by manufacturers or distributors and online databases on substances and mixtures

included in the mixture

- applicable regulations regarding substances and mixtures.

Full text of classifications not given in points 2.2 and 3.2:

H302 – Harmful if swallowed.

H314 – Causes severe skin burns and eye damage.

H318 – Causes serious eye damage.

Eye Dam. - Serious eye damage.

Skin Corr. - Corrosive to skin.

Acute Tox. - Acute toxicity

Training:

- The employer is obliged to inform all employees who come into contact with the mixture about the hazards and personal protective equipment specified in this safety data sheet

- The distributor is obliged to provide the recipient of the mixture with the information contained in this safety data sheet

This safety data sheet has been developed and is intended exclusively for this product, it does not constitute its specification and cannot be considered as a guarantee of its quality and compliance with customer requirements in individual applications. Its task is to provide assistance in the safe handling of the mixture (work safety and environmental protection), its transport and storage. In the event that the conditions of use are not under the manufacturer's control, the responsibility for the safe use of the product falls on the user. The data contained in this safety data sheet is based on the current state of our knowledge and current legal regulations. Recipients should ensure that they are applicable to their internal regulations and/or regulations in force in their countries.