SAFETY DATA SHEET

[In accordance with the criteria of Regulation No 1907/2006 (REACH) as amended]

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name:	**ULTRALIT HARD EXTRA**
Chemical name:	lithium silicate (MP>3,2)
CAS number:	12627-14-4
Registration number:	-

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

Relevant identified uses:	concrete hardener on the basis of lithium silicate with a high content of active lithium. Applied for densification, hardening and protection against dust formation of new and used flooring. For professional use.
Uses advised against:	not determined.

1.3 Details of the supplier of the safety data sheet

Distributor:	**ULTRALIT WORLDWIDE DISTRIBUTION**
Address:	ul. Parowcowa 4C, 02-445 Warszawa, Poland
Telephone/Fax:	+48 22 614-52-04/ +48 22 814-74-81

E-mail address for a competent person responsible for SDS: info@ultralit.eu

1.4 Emergency telephone number

112 (general emergency number)

Section 2: Hazards identification

2.1 Classification of the substance or mixture

The substance is not classified as hazardous for human health and for the environment.

2.2 Label elements

Hazard pictograms and signal words

None.

Hazard statements

None.

Precautionary statements

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

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

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

2.3 Other hazards

The substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation. The substance has not been included in the list established in accordance with Article 59 (1) for having endocrine disrupting properties, or as substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 (3) or Commission Regulation (EU) 2018/605.

Section 3: Composition/information on ingredients

3.1 Substances

Chemical name:	lithium silicate
Concentration:	< 40 %
CAS number:	12627-14-4

Section 4: First aid measures

4.1 Description of first aid measures

Skin contact: take off contaminated clothes. Wash the contaminated skin thoroughly with plenty of water. Consult a doctor, if disturbing symptoms appear.

Eye contact: protect the non-irritated eye, remove contact lenses. Wash the contaminated eye with plenty of water for 15 minutes. Avoid powerful water stream – risk of cornea damage. Consult an ophthalmologist if disturbing symptoms appear.

Ingestion: do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Immediately consult a doctor, show container or label.

Inhalation: remove the victim to fresh air. Keep victim warm and calm. Consult a doctor, if disturbing symptoms persist.

4.2 Most import ant symptoms and effects, both acute and delayed

No known adverse effects or critical hazards when properly used.

4.3 Indication of any immediate medical attention and special treatment needed

Physician makes a decision regarding further medical treatment after thoroughly examination of the injured. Symptomatic treatment.

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: water spray, foam - adjust firefighting measures to the surrounding materials.

Unsuitable extinguishing media: water jet – risk of the propagation of the flame.

5.2 Special hazards arising from the substance or mixture

During the fire, the product may produce harmful fumes containing e.g. carbon oxides and other unidentified products of thermal decomposition. Do not inhale combustion products, they can be dangerous for human health.

5.3 Advice for firefighters

The product is not flammable. Personal protection typical in case of fire. Do not stay in the fire zone without self-contained breathing apparatus and protective clothing resistant to chemicals. Collect used extinguishing agents. Do not allow them to enter sewers, surface water, groundwater or soil.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Limit the access for the outsiders into the breakdown area, until the suitable cleaning operations are completed. Ensure that the effects of breakdown are removed only by trained personnel. In case of large spills, isolate the exposed area. Avoid eyes contact and prolonged skin contact. Do not inhale vapours. Ensure adequate ventilation. Use personal protective equipment. Caution! Risk of slipping on spilled product.

6.2 Environmental precautions

In case of release of large amounts of the product, it is necessary to take appropriate steps to prevent it from spreading into the environment. Notify relevant emergency services.

6.3 Methods and material for containment and cleaning up

Place damaged container in an emergency container. Spills collect with absorbent, e.g. sand, soil, diatomaceous earth, vermiculite, and place it in an appropriate waste containers. Clean and ventilate the contaminated area.

6.4 Reference to other sections

Appropriate conduct with waste product – see section 13. Personal protective equipment – see section 8.

Section 7: Handling and storage

7.1 Precautions for safe handling

Handle in accordance with good occupational hygiene and safety practices. Do not eat, drink or smoke while working with the product. Avoid eye contamination and direct skin contact. Before break and after work wash hands. Do not inhale vapors. Ensure adequate ventilation. Use in accordance with its intended purpose. Keep the unused containers tightly closed. Containers that are opened should be properly resealed and kept upright to prevent leakage.

7.2 Conditions for safe storage, including any incompatibilities

Store only in original, tightly closed containers in a dry, well-ventilated place. Storage temperature: > 5 ºC. Suitable packaging materials: plastic, steel. Unsuitable packaging materials: aluminum, copper, zinc, tin and its alloys, brass, fiberglass, galvanized materials. Time of workability: 1 year under recommended storage and transport conditions. Avoid direct sunlight. Do not store with incompatible materials (subsection 10.5).

7.3 Specific end use(s)

No information about other uses than those mentioned in subsection 1.2.

Section 8: Exposure controls/personal protection

8.1 Control parameters

There are no occupational exposure limit values at working place for the substances present in the mixture at the European Union level.

Please check any national occupational exposure limit values in your country.

Basis: Commission Directive 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, 2019/1831/EU.

DNEL-values

workers, long-term exposition, systemic effects, dermal:	57 mg/kg/day
workers, long-term exposition, systemic effects, inhalative:	3,8 mg/m^3

PNEC-values

freshwater:	7,5 mg/l
marine water:	1 mg/l
intermittent release:	7,5 mg/l
sewage treatment plant:	348 mg/l

8.2 Exposure controls

Appropriate engineering controls

Use the product in accordance with good occupational hygiene and safety practices. When handling do not eat, drink or smoke. Before break and after work wash hands carefully. Avoid eye contamination and prolonged skin contact. Do not inhale vapors. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

The necessity to use and selection of appropriate personal protective equipment should take into account the type of risk posed by the product, working conditions and the way of handling the product. The personal protective equipment used must meet the requirements of Regulation (EU) 2016/425 and the relevant standards. The employer is obliged to provide protection measures appropriate to the activities performed and meeting all quality requirements, including their maintenance and cleaning. Any contaminated or damaged PPE must be replaced immediately.

Hand protection

In case of frequent or long-term contact with the product it is recommended to use resistant to the product rubber gloves (EN 374). Wear protective clothing.

The glove material has to be impermeable and resistant to the product. The choice of material for protective gloves should be made taking into account the breakthrough times, permeation rate and degradation. Moreover, the selection of the appropriate gloves does not only depend on the material, but also on other quality characteristics and varies from manufacturer to manufacturer. The exact breakthrough time has to be obtained from the glove manufacturer and it must be observed.

Eye/face protection

Use protective glasses, if there is a risk of eye contamination (EN 166).

Respiratory protection

Not required, if the ventilation is adequete.

Thermal hazards

Do not occur.

Environmental exposure controls

Do not allow the large quantity of mixture to contaminate ground water, wastewater, canalization or soil. Possible emissions from the ventilation systems and processing equipment should be controlled in order to determinate their compatibility with environmental protection regulations.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	liquid
Colour:	not determined
Odour	odourless
Melting point/freezing point:	-3 °C
Boiling point or initial boiling point and boiling range:	100 °C
Flammability:	product is not subject to flammability
Lower and upper explosion limit:	not determined
Flash point:	not determined
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH:	10-11
Kinematic viscosity:	not determined
Solubility:	miscible with water, insoluble in fats
Partition coefficient n-octanol/water (log value):	not determined
Vapour pressure:	not determined
Density and/or relative density:	1,040-1,240 g/cm^3
Relative vapour density:	not determined
Particle characteristics:	not applicable

9.2 Other information

Dynamic viscosity:	1,5-20 mPa·s

Section 10: Stability and reactivity

10.1 Reactivity

The product is reactive. It does not undergo dangerous polymerisation. See also 10.4-10.5.

10.2 Chemical stability

The product is stable under normal conditions of storage and use.

10.3 Possibility of hazardous reactions

In reaction with aluminum, zinc, lead, tin and its alloys hydrogen is released – it may form explosive mixtures with air. It forms gel and emits heat in reaction with acids. It may react with ammonium salts and gases may be emitted.

10.4 Conditions to avoid

Avoid extreme temperatures. Protect from frost.

10.5 Incompatible materials

Strong oxidizing agents, acids, ammonium salt, active metals, some organic compounds.

10.6 Hazardous decomposition products

Not known.

Section 11: Toxicological information

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

Information regarding acute and/or delayed results of the exposure was defined on the basis of the information on product's classification and/or toxicological studies as well as the experience and knowledge of the manufacturer.

Acute toxicity

LD_{50} (oral, rat) > 3400 mg/kg (lithium silicate, 37,5 %)

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

Skin corrosion/irritation

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

Serious eye damage/irritation

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

Respiratory or skin sensitization

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

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

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

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.

Information on likely routes of exposure

Routes of exposure: skin contact, eye contact, inhalation, ingestion.

Symptoms related to the physical, chemical and toxicological characteristics

Not applicable.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Not applicable.

11.2 Information on other hazards

Endocrine disrupting properties

The substance has not been included in the list established in accordance with Article 59 (1) for having endocrine disrupting properties, or as substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 (3) or Commission Regulation (EU) 2018/605.

Other information

Not applicable.

Section 12: Ecological information

12.1 Toxicity

Fish:	LC_{50}	1108 mg/l/96 h/*Brachydanio rerio*
Aquatic invertebrates:	EC_{50}	1700 mg/l/48 h/*Daphnia magna*
micororganisms:	EC_0	> 348 mg/l/18 h/*Pseudomonas utida*

The product is not classified as hazardous for environment.

12.2 Persistence and degradability

Not applicable – inorganic substances.

12.3 Bioaccumulative potential

Bioaccumulation is not expected.

12.4 Mobility in soil

Mobility of the substance depends on the hydrophilic and hydrophobic properties and biotic and abiotic conditions of soil, including its structure, climatic conditions, seasons and soil organisms.

12.5 Results of PBT and vPvB assessment

The substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation.

12.6 Endocrine disrupting properties

The substance has not been included in the list established in accordance with Article 59 (1) for having endocrine disrupting properties, or as substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 (3) or Commission Regulation (EU) 2018/605.

12.7 Other adverse effects

The mixture is not classified as hazardous to the ozone layer. Consider other harmful effects of individual components of the mixture on the environment (eg, global warming potential). Large spills of the product to water lead to increase of pH value, what has a negative impact on fauna and flora.

Section 13: Disposal considerations

13.1 Waste treatment methods

Disposal methods for the subtance: disposal in accordance with the local legislation. Small quantities of the product can be removed with municipal waste. Store residues in original containers. Recycling is preferred. Waste code should be given in the place of waste formation.

Disposal methods for used packing: reuse/recycle/eliminate empty containers in accordance with the legislation in force. Only containers completely empty can be recycled.

Legal basis: Directive 2008/98/EC as amended, 94/62/EC as amended.

Section 14: Transport information

14.1 UN number or ID number

Product is not classified as dangerous during transport.

14.2 UN proper shipping name

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

Section 15: Regulatory information

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

ADR Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG Code International Maritime Dangerous Goods Code.
IATA Dangerous Goods Regulations.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 as amended.
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC as amended.
Commission Regulation (EU) No 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste as amended.
Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives as amended.
Regulation (EU) No 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC.
Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.
Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC.
Commission Directive 2009/161/EU of 17 December 2009 establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC.
Commission Directive 2017/164/EU of 31 January 2017 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU.
Commission Directive 2019/1831/EU of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC.

15.2 Chemical safety assessment

There is no information about carrying out a Chemical Safety Assessment for the substance.

Section 16: Other information

Clarification of aberrations and acronyms

PBT	Persistent, Bioaccumulative and Toxic substance
vPvB	very Persistent, very Bioaccumulative substance

Trainings

Before commencing working with the product, the user should learn the Health & Safety regulations, regarding handling chemicals, and in particular, undergo a proper workplace training.

Key literature references and sources of data

This sheet was prepared on the basis of SDS provided by the manufacturer, literature data, online databases (eg. ECHA), our knowledge and experience, taking into account the current legislation.

Additional information

Version:	2.0/EN
Changes:	sections: 1-16
Safety Data Sheet made by:	**THETA** Consulting Sp. z o.o. (based on manufacturer's data)

The information above is based on a current available data concerning the product, but also on the experience and knowledge in this field of the producer. They are neither a quality description of the product nor a guarantee of particular features. They are to be treated as aid to safety in transport, storage and usage of the product. That does not free the user from the responsibility of improper usage of the information above and also of improper compliance with the law norms in the field.