

## SAFETY DATA SHEET

Prepared in accordance with COMMISSION REGULATION (EU) 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, Authorization and Restriction of Chemicals REACH (Official Journal of the European Union No. L 203 of 26.06.2020).

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

#### 1.1 Product identifier

*"SL " liquid concentrate/Solar system liquid (concentrate)/Solar system liquid (up to - "crystallization temperature" °C)/Vacuum tube collector liquid/HTL vacuum tube collector liquid.*

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

Identified uses: Solar installation liquid is an aqueous solution of propylene glycol with inhibitors, stabilizing additives and dye. The fluid is supplied by the manufacturer in the form of a concentrate to be diluted before use, or in the form of a ready diluted fluid with different crystallization temperatures. In the case of ready diluted fluid intended for vacuum tube collectors, additional dilution is forbidden, as this can lead to damage to the collector. The fluid is used for filling heating and cooling systems in which resistance to low temperatures, metal corrosion processes, development of biological life, etc. is required.

Undesirable uses: not specified.

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

**Supplier:**

**SUNEX S.A.**

Piaskowa 7

47-400 Racibórz

tel.: +48 32 414 92 12 e.no.61

fax: +48 32 414 92 13

E-mail of the person responsible for the safety data sheet: [adamszczotok@sunex.pl](mailto:adamszczotok@sunex.pl)

#### 1.4 Emergency telephone number

**Emergency phone number in Poland (open from 9:00 am to 4:00 pm: +48 32 414 92 12 e.no.64**

Date of preparation/updating: 09.11.2018/26.01.2023

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

*It does not meet the criteria for classification in accordance with the applicable regulations (Regulation 1272/2008 as amended).*

**Harmful effects on human health:**

In case of high concentration of vapours or direct entry of the product into the eyes, slight irritation, redness, tearing, itching may occur. Contamination of the skin with a large amount of the product may cause redness, itching, transient irritation. Long-term inhalation of vapours may cause slight irritation of the respiratory system.

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Ingestion of large quantities may cause nausea, vomiting, diarrhea.

### Environmental effects:

When used correctly, it does not pose a risk to the environment.

### Effects related to physical and chemical properties:

Under the influence of high temperature (fire), vapors are formed which may form explosive mixtures with air.

## 2.2 Label elements

Pictograms: Not required.

Warning signal: Not required.

Threats indicating the type of threat: Not required.

Precautionary statements: Not required.

***EUH210 Safety Data Sheet available on request***

## 2.3 Other hazards

The mixture does not meet the PBT and vPvB criteria. Does not contain ingredients that are considered endocrine disruptors according to Article 57(f) of the REACH Regulation or Regulation (EU) 2017/2100 or Regulation (EU) 2018/605 at concentrations of 0.1% or higher.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixture

Product identifier: liquid concentrate "SL"/Solar system liquid (concentrate)/Solar system liquid (up to - "crystallization temp." °C)/Tubular-vacuum collector liquid/HTL tubular-vacuum collector liquid.

Mixture components (concentrate\*\*):

Name of the substance	index number	CAS No.	WE No.	Mass share in%.	Hazard classes and category codes	Return codes indicating the type of threat
Propane-1,2-diol Registration number: 01-2119456809-23-XXXX	none	57-55-6	200-338-0	approx. 91	none	none

In addition, the product contains:  
water (approx. 2%)

\*\* Percentage of concentrate in diluted liquids and physicochemical properties are shown in Section 9.2

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## SECTION 4: FIRST AID MEASURES

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### 4.1 Description of first aid measures

- Inhalation: Bring the injured person out of the place of exposure, let him/her lie down or sit in a comfortable position, ensure peace of mind, protect against heat loss. If necessary, call a doctor.
- Skin contact: Rinse immediately with plenty of water, remove contaminated clothing, wash skin with plenty of water and soap. Consult a doctor if necessary.
- Eye contact: Rinse immediately with plenty of lukewarm water, preferably running water, for at least 15 minutes. Remove contact lenses. Avoid strong jets of water because of the risk of mechanical damage to the cornea. If the irritation persists, consult an ophthalmologist.
- Ingestion: If swallowed, do not induce vomiting. Rinse mouth with water and then give plenty of water to drink. Consult a doctor if necessary.

### 4.2 Most important acute and delayed symptoms and effects of exposure

In case of high concentration of vapours or direct entry of the product into the eyes, slight irritation, redness, tearing, itching may occur. Contamination of the skin with a large amount of the product may cause redness, itching, transient irritation. Long-term inhalation of vapours may cause slight irritation of the respiratory system. Ingestion of large quantities may cause nausea, vomiting, diarrhea.

### 4.3 Indication of any immediate medical attention and special treatment to the victim

No special recommendations. Use symptomatic treatment.

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## SECTION 5: FIRE FIGHTING MEASURES

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### 5.1 Extinguishing media

#### Suitable extinguishing media:

Foam, carbon dioxide, extinguishing powders, water - dispersed currents.

#### Improper extinguishing media:

Do not use compact water jets on the surface of liquids.

### 5.2 Special hazards arising from the substance or mixture

Carbon monoxide and carbon dioxide may be formed during a fire.

### 5.3 Advice for Firefighters

Cool containers exposed to fire from a safe distance with a dispersed stream of water (explosion hazard); if possible, remove them from the hazardous area. Wear gas-tight antistatic clothing, insulating respiratory protection equipment.

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### SECTION 6: ACCIDENTAL RELEASE MEASURES

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- 6.1 **Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing made of natural materials (cotton) or synthetic fibers, gloves made of nitrile (thickness > 0.4 mm, breakthrough time  $\geq$  480 min) and safety goggles. Remove sources of ignition (extinguish open fire, announce smoking ban and use of sparking tools). Remove unprotected persons who do not take part in removing failures from the threatened area. Avoid direct contact with the mixture.
- 6.2 **Environmental precautions**  
Protect against penetration into drains, surface and ground water and soil.
- 6.3 **Methods and materials for containment and cleaning up**  
Place the damaged packaging in the replacement pack. Absorb small quantities in a chemically inert binding material (sand, diatomaceous earth), transfer to closed containers and dispose of for recycling or recovery. Rinse the contaminated surface with plenty of water.
- 6.4 **References to other sections**  
Dispose of as recommended in Section 13.
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### SECTION 7: HANDLING AND STORAGE OF SUBSTANCES AND MIXTURES

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- 7.1 **Precautions for safe handling**  
Ensure adequate general ventilation. Keep away from sources of high temperature and sources of ignition. It is advisable to take precautions to avoid contact with skin and eyes when handling large amounts. Wash hands during breaks and after work. Remove contaminated clothing, wash before re-use.
- 7.2 **Conditions for safe storage, including any incompatibilities**  
Store in original, properly marked, tightly closed containers in a cool, dry, well-ventilated storage room. Keep away from sources of heat, ignition sources, oxidizing agents. Protect against sunlight.
- 7.3 **Specific end use(s)**  
No information on applications other than those listed in section 1.2.
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### SECTION 8: EXPOSURE CONTROL / PROTECTIVE EQUIPMENT

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- 8.1 **Control parameters**  
Legal basis:  
Regulation of the Minister of Family, Labor and Social Policy (Poland) of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws, item 1286, 2018) Regulation of the Minister of Family, Labor and Social Policy of January 9, 2020 amending the Regulation.
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w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy (Dz.U. poz. 61, 2020)

Rozporządzenie Ministra Rozwoju, Pracy i Technologii z dnia 18 lutego 2021 r. zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy (Dz.U. poz. 325, 2021)

<u>Name of the substance</u>	<u>CAS No.</u>	<u>Standard</u>	<u>value</u>	<u>unit</u>
Propane-1,2-diol – Vapour and inhalable fraction	57 – 55 - 6	NDS NDSCh and NDSP	100 not determined	mg/m <sup>3</sup>

## **Propan-1,2-diol:**

DNEL<sub>employee</sub> (inhalation, chronic toxicity, systemic effect) 168 mg/m<sup>3</sup>

DNEL<sub>employee</sub> (inhalation, chronic toxicity, local effect) 10 mg/m<sup>3</sup>

DNEL<sub>consumer</sub> (inhalation, chronic toxicity, systemic effect) 50 mg/m<sup>3</sup>

DNEL<sub>consumer</sub> (inhalation, chronic toxicity, local effect) 10 mg/m<sup>3</sup>

PNEC<sub>freshwater</sub>: 260 mg/l

PNEC<sub>sea water</sub>: 26 mg/l

PNEC<sub>sediment (sea water)</sub>: 572 mg/kg sediment

PNEC<sub>sediment (sea water)</sub>: 57.2 mg/kg sediment

PNEC<sub>soil</sub>: 50 mg/soil

PNEC<sub>occasional release</sub>: 183 mg/l

PNEC<sub>sewage treatment plant</sub>: 20000 mg/l

PNEC<sub>orally</sub>: 1133 mg/l

## 8.2 Exposure control

### 8.2.1 *Appropriate technical control measures*

Use adequate general ventilation in the room.

### 8.2.2 *Individual protection measures such as personal protective equipment.*

Respiratory: No respiratory protection is required by proper handling.

Hands and skin: When handling large quantities, wear protective clothing made of natural materials (cotton) or synthetic fibres, gloves made of nitrile (thickness 0.4 mm, puncture time 480 min).

Eyes: They are not required.

Occupational health and safety: The general regulations of the industrial health and safety at work apply. Do not exceed the permissible normative concentrations in the workplace environment. Remove contaminated clothing at the end of work. Wash hands and face before breaks. After work wash the whole body thoroughly. Do not eat, drink or smoke during work.

### 8.2.3 *Control of environmental exposure*

Protect against entry into the municipal water and sewage system and watercourses.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) State of aggregation

Liquid.

b) Color

Liquid in green, yellow or pink.

c) Fragrance

Odorless.

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d) Melting / freezing point

Concentrate below - 60 °C

The solidification point of the final diluted liquid:

Liquid for solar systems (down to -15°C): below -15 °C

Liquid for solar systems (down to -20°C): below -20 °C

Liquid for solar systems (down to -25°C): below -25 °C

Liquid for solar systems (down to -28°C): below -28 °C

Liquid for solar systems (down to -29°C): below -29 °C

Liquid for solar systems (down to -30°C): below -30 °C

Liquid for solar systems (down to -35°C): below -35 °C

Liquid for solar systems (down to -39°C): below -39 °C.

e) Initial boiling point and boiling range

Liquid in the form of concentrate: 186 °C

Liquid for vacuum tube collectors: 109 °C.

f) Flammability of materials

Does not apply

g) Upper/lower flammability limit or upper/lower explosive limit

Lower: 2.6 % vol. (propano-1,2-diol)

Upper: 12.5 % vol. (propano-1,2-diol).

h) Temperatura zapłonu

104 °C (propane-1,2-diol)

i) Temperatura samozapłonu

> 400 °C (propane-1,2-diol)

j) Decomposition temperature

No data available.

k) pH

No data available.

l) Viscosity

Concentrate: ~ 40 mm<sup>2</sup>/s (w 20 °C)

Liquid for vacuum tube collectors: ~ 14 mm<sup>2</sup>/s (at 20 °C).

m) Solubility

Soluble in water, acetone, chloroform.

n) Partition coefficient n-octanol/water (log ratio value)

- 1.07 (propane-1,2-diol).

o) Vapour density

20 Pa (25 °C) (propane-1,2-diol)

p) Density or relative density

1.046 (water=1) (liquid in the form of concentrate, liquid for vacuum tube collectors)

q) Relative vapor density

2.62 (air=1) (propane-1,2-diol)

r) Characterization of particles

Not applicable because the product is in liquid form

### 9.2 Other information

Basic parameters depending on the concentrate content:

Crystallization temp. [°C]	Concentrate volume [%]	Water volume [%]	Density at 20 °C [g/cm <sup>3</sup> ]	Viscosity at 20 °C [mm <sup>2</sup> /s]
-15	35	65	1.027	5
-20	40	60	1.032	7
-25	44	56	1.038	8

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-28	45	55	1.039	9
-29	46	54	1.039	9
-30	47	53	1.040	10
-35	52	48	1.042	12
-39	55	45	1.046	14

## 9.2.1. Information on physical hazard classes

- a) Explosives: Not applicable.
- b) Flammable gases: Not applicable.
- c) Aerosols: Not applicable.
- d) Oxidizing gases: Not applicable.
- e) Gases under pressure: Not applicable.
- f) Flammable liquids: Not applicable.
- g) Flammable solids: Not applicable.
- h) Self-reactive substances and mixtures: Not applicable.
- i) Pyrophoric liquids: Not applicable.
- j) Pyrophoric solids: Not applicable.
- k) Self-heating substances and mixtures: Not applicable.
- l) Substances and mixtures that emit flammable gases when in contact with water: Not applicable.
- m) Oxidizing liquids: Not applicable.
- n) Oxidizing solids: Not applicable.
- o) Organic peroxides: Not applicable.
- p) Substances that cause corrosion of metals: Not applicable.
- q) Desensitized explosives: Not applicable.

## 9.2.2. Other safety features

- a) mechanical sensitivity: No data available.
- b) Self-accelerating polymerization temperature: No data available.
- c) formation of explosive dust-air mixture: No data available.
- d) Acid/base reserve: No data available.
- e) Evaporation rate: No data available.
- f) Mixing ability: No data available.
- g) conductivity: no data.
- h) corrosive action: No data available.
- i) Gas group: Not applicable.
- j) Redox potential: No data available.
- k) Potential for radical formation: No data available.
- l) photocatalytic properties; No data.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

Under conditions of storage and handling as intended, no reactivity.

### 10.2 Chemical stability

Under normal conditions of use and storage, the mixture is stable.

### 10.3 Possibility of hazardous reactions

Vapor mixtures with air may form explosive mixtures.

### 10.4 Circumstances to avoid

High temperature, sources of ignition, open fire.

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- 10.5 Incompatible materials  
Strong oxidants, strong acids and alkalis
- 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

#### Acute toxicity:

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

<u>Ingredient</u>	<u>CAS-no.</u>	<u>Dose</u>	<u>value</u>	<u>unit</u>
Propane-1,2-diol	57-55-6	DL <sub>50</sub> - orally rat	> 20000	mg/kg
		CL <sub>50</sub> – inhalation rabbit	> 300	mg/l (2h)
		DL <sub>50</sub> – skin rabbit	> 2000	mg/kg

#### 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 sensitisation:

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.

#### Toxic effects on target organs - single exposure:

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

#### Toxic effects on target organs - repeated exposure:

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

#### Aspiration hazard:

Based on available data, the classification criteria are not met

### 11.2 Information on other hazards

#### 11.2.1. Endocrine disrupting properties

No information on endocrine disrupting effects.

#### 11.2.2. Other information

No data available.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

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

<u>Ingredient</u>	<u>CAS-no.</u>	<u>Dose</u>	<u>value</u>	<u>unit</u>
Propane-1,2-diol	57-55-6	CL <sub>50</sub> - fish ( <i>Oncorhynchus mykiss</i> )	40613	mg/l (96h)
		CL <sub>50</sub> - invertebrates ( <i>Ceriodaphnia dubia</i> )	18340	mg/l (48h)
		CL <sub>50</sub> - invertebrates ( <i>Mysidopsis bahia</i> )	18800	mg/l (96h)

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CE <sub>50</sub> - algae ( <i>Selenastum capricornutum</i> )	19000	mg/l (96h)
NOEC - invertebrates ( <i>Ceriodaphnia</i> )	13020	mg/l (7 days)
NOEC- bacteria ( <i>Pseudomonas putida</i> )	>20000	mg/l (98h)

### 12.2 Persistence and degradability

Propane-1,2-diol: readily biodegradable (81 % on 28 days – OECD 301F test, 96 % on 64 days – OECD 306 test)

#### Data on permissible environmental pollution:

Permissible pH of discharged sewage - 6.5 - 9 (Regulation of the Minister of the Environment of 18 November 2014 on the conditions to be met when discharging sewage into water or soil, and on substances particularly harmful to the aquatic environment (Journal of Laws 2014, item 1800)).

### 12.3 Bioaccumulative potential

Octanol/water (Kow) partition coefficient: Not determined for the mixture.

Propane-1,2-diol: - 1.07

Bioconcentration factor (BCF): < 100

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

The mixture does not meet the PBT and vPvB criteria.

### 12.6 Endocrine disrupting properties

No information on endocrine disrupting effects.

### 12.7 Other adverse effects

No data available.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Do not dispose of the product together with municipal waste, do not empty into the sewerage system.  
Do not allow contamination of ground and surface water.

Waste code:

14 16 01 15 Anti-freeze fluids other than those mentioned in 16 01 14

The packaging waste code:

15 01 02 Plastic packaging

Empty used packaging thoroughly. Reusable packaging can be reused (after cleaning). Disposable packaging (after thorough cleaning) to be recycled.

#### Special precautions:

No special recommendations.

#### Legal basis:

Announcement by the Speaker of the Sejm of the Republic of Poland of April 16, 2020 on the announcement of the uniform text of the Law on Waste (Journal of Laws, item 797, 2020).

Announcement by the Speaker of the Sejm of the Republic of Poland of December 1, 2022 on the announcement of the consolidated text of the Act on packaging and packaging waste management (Journal of Laws, item 160, 2023) REGULATION OF THE MINISTER OF CLIMATE OF January 2, 2020 on the waste catalog (Journal of Laws, item 10, 2020).

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### SECTION 14: TRANSPORT INFORMATION

- ADR/RID, IMDG, IATA
- 14.1 UN number or ID number  
Not applicable.
- 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  
The mixture is not hazardous to the environment according to the criteria of the UN Model Regulations.
- 14.6 Special precautions for users  
No special recommendations.
- 14.7 Maritime transport in bulk in accordance with IMO instruments  
Not applicable.

### SECTION 15: REGULATORY INFORMATION

- 15.1 Safety, health and environmental regulations specific to the substance or mixture
- NOTICE OF THE MARSHALL OF THE Sejm of the Republic of Poland of July 22, 2022 on the announcement of the consolidated text of the Law on chemical substances and their mixtures (Journal of Laws, item 1816, 29.08.2022).
- REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of December 16, 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No. 1907/2006 (Official Journal of the European Union series L No. 353 of December 31, 2008) as amended (adaptations to technical progress 1 - 18 ATP).
- REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of March 9, 2016 on personal protective equipment and repealing Council Directive 89/686/EEC (Official Journal of the EU, series L/81 of 31.03.2016).
- REGULATION OF THE MINISTER OF FAMILY, LABOR AND SOCIAL POLICY (Poland) of June 12, 2018 on the highest permissible concentrations and intensities of harmful factors for health in the work environment (Journal of Laws, item 1286, 2018) REGULATION OF THE MINISTER OF FAMILY, LABOR AND SOCIAL POLICY of January 9, 2020 amending the regulation on the highest permissible concentrations and intensities of harmful factors for health in the work environment (Journal of Laws, item 61, 2020)
- Regulation of the Minister of Development, Labor and Technology dated February 18, 2021, amending the Regulation on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws, item 325, 2021).
- Regulation of the Minister of Health (poland) of February 2, 2011 on testing and measurement of factors harmful to health in the work environment (Journal of Laws No. 33, item 166, 2011).

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Announcement by the Minister of Health (Poland) of September 9, 2016 on the announcement of the unified text of the Regulation of the Minister of Health on occupational safety and health related to the presence of chemical agents in the workplace (Journal of Laws, item 1488, 2016).

Government Statement (Poland) of July 26, 2005 on the entry into force of the amendments to Annexes A and B of the European Agreement concerning the international carriage of non-hazardous goods by road (ADR) made at Geneva on September 30, 1957 (Journal of Laws No. 178, item 1481, 2005, as amended).

Announcement by the Speaker of the Sejm of the Republic of Poland of April 16, 2020 on the announcement of the uniform text of the Law on Waste (Journal of Laws, item 797, 2020).

Announcement by the Speaker of the Sejm of the Republic of Poland of December 1, 2022 on the announcement of the consolidated text of the Act on packaging and packaging waste management (Journal of Laws, item 160, 2023)  
REGULATION OF THE MINISTER OF CLIMATE OF January 2, 2020 on the waste catalog (Journal of Laws, item 10, 2020).

Regulation (EC) 1907/2006 of the European Parliament and of the Council of December 18, 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 (Official Journal of the European Union series L No. 396 of December 30, 2006 as amended).

### 15.2 Chemical safety assessment

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

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## SECTION 16: OTHER INFORMATION

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The information contained in this safety data sheet, taken from the mixture sheet provided by the manufacturer, has been corrected, supplemented and verified at the Łukasiewicz Research Network - **Institute of Industrial Chemistry named after Prof. I. Mościcki in Warsaw**.

#### Other information sources:

Data for registered substances: <http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances>

The information provided in the safety data sheet is intended to describe the product only from the point of view of safety requirements. The user is responsible for creating conditions for safe use of the product, and it is the user who assumes responsibility for the consequences resulting from improper use of this product.

#### Abbreviation:

NDS - Maximum concentration at the workplace - weighted average maximum concentration whose effects on an employee during his or her eight-hour working time, throughout his or her working life, should not lead to changes in his or her state of health and the state of health of future generations.

NDSch - Highest admissible instant concentration - maximum permissible instant concentration established as an average value, which should not cause negative changes in the health condition of the employee and in the health of his future generations if he stays in the work environment for no longer than 30 minutes during the working shift

NDSP - concentration value, which due to the threat to the health or life of an employee cannot be exceeded in the work environment at any time

vPvB - Very persistent and very bioaccumulative

PBT - Persistent, bioaccumulative and toxic

DNEL - Level of non-harmful effects on human health - Level of exposure to substances not harmful to human health

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*Liquid concentrate "SL"/Solar system liquid (concentrate)/Solar system liquid (up to - "crystallization temperature" °C)/Vacuum tube collector liquid/HTL vacuum tube collector liquid.*

## SAFETY DATA SHEET

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*Prepared in accordance with COMMISSION REGULATION (EU) 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, Authorization and Restriction of Chemicals REACH (Official Journal of the European Union No. L 203 of 26.06.2020).*

PNEC - Predicted no-effect concentration - concentration of the substance below which no harmful effects on the environment are expected to occur

DL<sub>50</sub> - Fatal dose - the dose at which 50 % of test animals are observed to die within a specified time interval

CL<sub>50</sub> - Fatal concentration - concentration at which 50 % of test animals are observed to die within a specified time interval

CE<sub>50</sub> - Effective concentration - an effective concentration of the substance resulting in a response of 50% of the maximum value

CI<sub>50</sub> - A medial concentration that causes 50% inhibition of a parameter, such as growth over a specified time interval

BCF - Bioconcentration factor (bio-concentration) - ratio of substance concentration in the body to its concentration in equilibrium water

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road

RID - Regulations Concerning the International Transport of Dangerous Goods by Rail

IMDG - International Maritime Dangerous Goods Code

IATA - International Air Transport Association

IMO - Międzynarodowa Organizacja Morska

CAS - the number assigned to the chemical in the Chemical Abstracts Service list

WE - reference number used in the European Union to identify dangerous substances, in particular those registered in the European List of Existing Substances with a Commercial Value (EINECS - European Inventory of Existing Chemical Substances), or European List of Notified Chemical Substances - ELINCS), or the list of chemicals listed in the „No-longer polymers” publication

UN number - the four-digit distinguishing number of the material in the UN list of hazardous materials derived from the „UN Model Regulations”; into which the individual material, mixture or object is classified.

*Update: adaptation to the requirements of Reg. 2020/878, change of address data, change of composition in section 3.2, changes in section 8 (NDS), 11, 12, 13, update of legal acts in section 15.1, addition of explanation of abbreviations in section 16.*

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