

This SDS is an English translation of Regulation (EU) no 2015/830, without any country-specific legislation

### **Liqcreate - Flexible-X**

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

**1.1 Product identifier:** Ligcreate - Flexible-X

Other means of identification:

Non-applicable

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

Relevant uses: Resin for 3D Printing. For professional user/industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

Liqcreate Texasdreef 7

3565 CL Utrecht - The Netherlands

Phone.: +31850605849 info@liqcreate.com www.liqcreate.com

**1.4** Emergency telephone number: +31850605849 Mo-Fr 8:30-17:00

#### **SECTION 2: HAZARDS IDENTIFICATION**

#### 2.1 Classification of the substance or mixture:

### CLP Regulation (EC) No 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411

Eye Irrit. 2: Eye irritation, Category 2, H319

Skin Irrit. 2: Skin irritation, Category 2, H315

Skin Sens. 1B: Sensitisation, skin, Category 1B, H317

### 2.2 Label elements:

#### CLP Regulation (EC) No 1272/2008:

#### Warning





### Hazard statements:

Aguatic Chronic 2: H411 - Toxic to aguatic life with long lasting effects.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Skin Irrit. 2: H315 - Causes skin irritation.

Skin Sens. 1B: H317 - May cause an allergic skin reaction.

### **Precautionary statements:**

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P264: Wash thoroughly after handling.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

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

P302+P352: IF ON SKIN: Wash with plenty of water.

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

P332+P313: If skin irritation occurs: Get medical advice/attention.

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P337+P313: If eye irritation persists: Get medical advice/attention.

P391: Collect spillage.

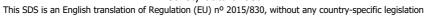
P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

#### **Supplementary information:**

Contains (5-ethyl-1,3-dioxan-5-yl)methyl acrylate, 2,2-bis(acryloyloxymethyl)butyl acrylate, diisodecyl phenyl phosphite, Diphenyl (2,4,6-trimethylbenzoyl)phosphine oxide, pentaerythritol tetraacrylate.

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### SECTION 2: HAZARDS IDENTIFICATION (continued)

#### 2.3 Other hazards:

Product fails to meet PBT/vPvB criteria

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substance:

Non-applicable

#### 3.2 Mixture:

Chemical description: Mixture of substances

**Components:** 

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

	Identification	Chemical name/Classification					
CAS: EC:	Non-applicable 944-664-8	Urethane Acrylate O	igomer(1) Self-classif	ed 9 - <30 %			
Index:	Non-applicable Non-applicable	Regulation 1272/2008					
CAS: EC:	4986-89-4 225-644-1	acrylate(1) ATP CLP00					
Index:	607-122-00-9 Non-applicable	Regulation 1272/2008	Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Warning	9 - <30 %			
CAS: EC:	66492-51-1	(5-ethyl-1,3-dioxan-	5-yl)methyl acrylate <sup>(1)</sup> Self-classif				
Index:	266-380-7 607-133-00-9 01-2119976303-36- XXXX	Regulation 1272/2008	Aquatic Chronic 2: H411; Skin Irrit. 2: H315; Skin Sens. 1B: H317 - Warning	9 - <30 %			
CAS: EC:	7534-94-3 231-403-1	exo-1,7,7-trimethylb	icyclo[2.2.1]hept-2-yl methacrylate(1) ATP CLP00				
Index:	251-403-1 607-134-00-4 01-2119886505-27- XXXX	Regulation 1272/2008	Eye Irrit. 2: H319; Skin Irrit. 2: H315; STOT SE 3: H335 - Warning	? 3 - <9 %			
CAS: EC:	75980-60-8 278-355-8 015-203-00-X : 01-2119972295-29- XXXX	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide(1)  Self-classifier					
Index:		Regulation 1272/2008	Aquatic Chronic 2: H411; Repr. 2: H361f; Skin Sens. 1B: H317 - Warning	2 - <2.5 %			
CAS:	15625-89-5 239-701-3 607-111-00-9 : 01-2119489896-11- XXXX	2,2-bis(acryloyloxymethyl)butyl acrylate(1) Self-classified					
		Regulation 1272/2008	Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Warning	0.5 - <2 %			
CAS: EC:	25550-98-5 247-098-3	diisodecyl phenyl ph	osphite(1) Self-classif	ed			
Index:	Non-applicable 01-2119962888-14- XXXX	Regulation 1272/2008	Skin Sens. 1: H317 - Warning	9.1 - <0.5 %			
CAS: EC:	108-88-3	Toluene <sup>(2)</sup>	ATP CLP00				
Index:	203-625-9 601-021-00-3 : 01-2119471310-51- XXXX	Regulation 1272/2008	Asp. Tox. 1: H304; Flam. Liq. 2: H225; Repr. 2: H361d; Skin Irrit. 2: H315; STOT RE 2: H373; STOT SE 3: H336 - Danger	0.01 - <0.1			
CAS: EC:	108-95-2 203-632-7	phenol <sup>(2)</sup>	ATP CLP00				
Index:	203-632-7 604-001-00-2 01-2119471329-32- XXXX	Regulation 1272/2008	Acute Tox. 3: H301+H311+H331; Muta. 2: H341; Skin Corr. 1B: H314; STOT RE 2: H373 - Danger	<0.01 %			

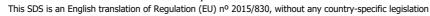
<sup>(1)</sup> Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830 (2) Substance with a Union workplace exposure limit

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

### Other information:

Identification	Specific concentration limit
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate CAS: 7534-94-3 EC: 231-403-1	% (w/w) >=10: STOT SE 3 - H335
phenol CAS: 108-95-2 EC: 203-632-7	% (w/w) >=3: Skin Corr. 1B - H314 1<= % (w/w) <3: Skin Irrit. 2 - H315 % (w/w) >=1: Eye Irrit. 2 - H319

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### **Liqcreate - Flexible-X**

#### **SECTION 4: FIRST AID MEASURES**

#### 4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

#### By inhalation:

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

#### By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

### By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

### By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

### 4.2 Most important symptoms and effects, both acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

### 4.3 Indication of any immediate medical attention and special treatment needed:

Non-applicable

### **SECTION 5: FIREFIGHTING MEASURES**

### 5.1 Extinguishing media:

#### Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, manipulation and use, but the product contains flammable substances. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

#### Unsuitable extinguishing media:

 $\ensuremath{\mathsf{IT}}$  IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

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

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

#### 5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

### **Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures:

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### **Liqcreate - Flexible-X**

### SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

### **6.2 Environmental precautions:**

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

#### 6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

#### 6.4 Reference to other sections:

See sections 8 and 13.

### **SECTION 7: HANDLING AND STORAGE**

### 7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Avoid the evaporation of the product as it contains flammable substances, which could form flammable vapour/air mixtures in the presence of sources of ignition. Control sources of ignition (mobile phones, sparks,...) and transfer at slow speeds to avoid the creation of electrostatic charges. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

### 7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.: 5 °C

Maximum Temp.: 30 °C

Maximum time: 15 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

### 7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

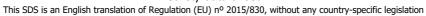
### 8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

	Identification	Occupational exposure limits		
Toluene		IOELV (8h)	50 ppm	192 mg/m <sup>3</sup>
CAS: 108-88-3	EC: 203-625-9	IOELV (STEL)	100 ppm	384 mg/m <sup>3</sup>
phenol		IOELV (8h)	2 ppm	8 mg/m <sup>3</sup>
CAS: 108-95-2	EC: 203-632-7	IOELV (STEL)	4 ppm	16 mg/m <sup>3</sup>

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification Occupational exposure limits

### **DNEL (Workers):**

		Short	Short exposure		Long exposure	
Identification		Systemic	Local	Systemic	Local	
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable	
CAS: 7534-94-3	Dermal	Non-applicable	Non-applicable	0,35 mg/kg	Non-applicable	
EC: 231-403-1	Inhalation	Non-applicable	Non-applicable	1,22 mg/m <sup>3</sup>	Non-applicable	
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable	
CAS: 75980-60-8	Dermal	Non-applicable	Non-applicable	0,233 mg/kg	Non-applicable	
EC: 278-355-8	Inhalation	Non-applicable	Non-applicable	0,822 mg/m <sup>3</sup>	Non-applicable	
2,2-bis(acryloyloxymethyl)butyl acrylate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable	
CAS: 15625-89-5	Dermal	Non-applicable	Non-applicable	83 mg/kg	Non-applicable	
EC: 239-701-3	Inhalation	Non-applicable	Non-applicable	3,5 mg/m <sup>3</sup>	Non-applicable	
diisodecyl phenyl phosphite	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable	
CAS: 25550-98-5	Dermal	Non-applicable	Non-applicable	50 mg/kg	Non-applicable	
EC: 247-098-3	Inhalation	Non-applicable	Non-applicable	70,5 mg/m <sup>3</sup>	Non-applicable	
Toluene	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable	
CAS: 108-88-3	Dermal	Non-applicable	Non-applicable	384 mg/kg	Non-applicable	
EC: 203-625-9	Inhalation	384 mg/m <sup>3</sup>	384 mg/m <sup>3</sup>	192 mg/m <sup>3</sup>	192 mg/m <sup>3</sup>	
phenol	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable	
CAS: 108-95-2	Dermal	Non-applicable	Non-applicable	1,23 mg/kg	Non-applicable	
EC: 203-632-7	Inhalation	Non-applicable	16 mg/m <sup>3</sup>	8 mg/m³	Non-applicable	

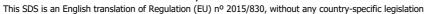
### DNEL (General population):

	Short	Short exposure		Long exposure	
Identification		Systemic	Local	Systemic	Local
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate	Oral	Non-applicable	Non-applicable	0,21 mg/kg	Non-applicable
CAS: 7534-94-3	Dermal	Non-applicable	Non-applicable	0,21 mg/kg	Non-applicable
EC: 231-403-1	Inhalation	Non-applicable	Non-applicable	0,36 mg/m <sup>3</sup>	Non-applicable
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	Oral	Non-applicable	Non-applicable	0,0833 mg/kg	Non-applicable
CAS: 75980-60-8	Dermal	Non-applicable	Non-applicable	0,0833 mg/kg	Non-applicable
EC: 278-355-8	Inhalation	Non-applicable	Non-applicable	0,145 mg/m <sup>3</sup>	Non-applicable
2,2-bis(acryloyloxymethyl)butyl acrylate	Oral	Non-applicable	Non-applicable	0,5 mg/kg	Non-applicable
CAS: 15625-89-5	Dermal	Non-applicable	Non-applicable	42 mg/kg	Non-applicable
EC: 239-701-3	Inhalation	Non-applicable	Non-applicable	0,87 mg/m <sup>3</sup>	Non-applicable
diisodecyl phenyl phosphite	Oral	Non-applicable	Non-applicable	5 mg/kg	Non-applicable
CAS: 25550-98-5	Dermal	Non-applicable	Non-applicable	25 mg/kg	Non-applicable
EC: 247-098-3	Inhalation	Non-applicable	Non-applicable	35,3 mg/m <sup>3</sup>	Non-applicable
Toluene	Oral	Non-applicable	Non-applicable	8,13 mg/kg	Non-applicable
CAS: 108-88-3	Dermal	Non-applicable	Non-applicable	226 mg/kg	Non-applicable
EC: 203-625-9	Inhalation	226 mg/m <sup>3</sup>	226 mg/m <sup>3</sup>	56,5 mg/m <sup>3</sup>	56,5 mg/m <sup>3</sup>
phenol	Oral	Non-applicable	Non-applicable	0,4 mg/kg	Non-applicable
CAS: 108-95-2	Dermal	Non-applicable	Non-applicable	0,4 mg/kg	Non-applicable
EC: 203-632-7	Inhalation	Non-applicable	Non-applicable	1,32 mg/m <sup>3</sup>	Non-applicable

### PNEC:

Identification				
(5-ethyl-1,3-dioxan-5-yl)methyl acrylate	STP	30 mg/L	Fresh water	0,004 mg/L
CAS: 66492-51-1	Soil	0,001 mg/kg	Marine water	0 mg/L
EC: 266-380-7	Intermittent	0,04 mg/L	Sediment (Fresh water)	0,019 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,002 mg/kg

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate	STP	2,45 mg/L	Fresh water	0,00233 mg/L
CAS: 7534-94-3	Soil	0,239 mg/kg	Marine water	0,000233 mg/L
EC: 231-403-1	Intermittent	0,0179 mg/L	Sediment (Fresh water)	1,2 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,12 mg/kg
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	STP	Non-applicable	Fresh water	0,0014 mg/L
CAS: 75980-60-8	Soil	0,0222 mg/kg	Marine water	0,00014 mg/L
EC: 278-355-8	Intermittent	0,014 mg/L	Sediment (Fresh water)	0,115 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,0115 mg/kg
2,2-bis(acryloyloxymethyl)butyl acrylate	STP	6,25 mg/L	Fresh water	0,00087 mg/L
CAS: 15625-89-5	Soil	0,003 mg/kg	Marine water	0,000087 mg/L
EC: 239-701-3	Intermittent	0,0087 mg/L	Sediment (Fresh water)	0,017 mg/kg
	Oral	0,01 g/kg	Sediment (Marine water)	0,002 mg/kg
Toluene	STP	13,61 mg/L	Fresh water	0,68 mg/L
CAS: 108-88-3	Soil	2,89 mg/kg	Marine water	0,68 mg/L
EC: 203-625-9	Intermittent	0,68 mg/L	Sediment (Fresh water)	16,39 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	16,39 mg/kg
phenol	STP	2,1 mg/L	Fresh water	0,008 mg/L
CAS: 108-95-2	Soil	0,136 mg/kg	Marine water	0,001 mg/L
EC: 203-632-7	Intermittent	0,031 mg/L	Sediment (Fresh water)	0,091 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,009 mg/kg

### 8.2 Exposure controls:

A.- General security and hygiene measures in the work place

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

### B.- Respiratory protection

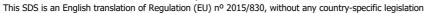
Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory respiratory tract protection	Filter mask for gases and vapours (Filter type: FFP2)	CAT III	EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.
Mandatory respiratory tract protection	Filter mask for gases and vapours (Filter type: A)	CAT III	EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

### C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory hand protection	Protective gloves against minor risks (Material: Nitrile)	CATI		Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420:2004+A1:2010 and EN ISO 374-1:2016+A1:2018

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Ocular and facial protection





### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Pictogram	PPE	Labelling	CEN Standard	Remarks
Mandatory face protection	Panoramic glasses against splash/projections.	CATII	EN 166:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

#### E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Anti-slip work shoes	CATII	EN ISO 20347:2012	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2012 y EN 13832-1:2007
	Work clothing	CATI		Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994.

### F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	<b>6</b> +	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011
Emergency shower		Eyewash stations	

### **Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

### Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply): 0,03 % weight V.O.C. density at 20 °C: Non-applicable

Average carbon number: 7

Average molecular weight: 92,1 g/mol

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

### Appearance:

Physical state at 20 °C:

Appearance:

Colour:

Odour:

Resin

Odour threshold: Non-applicable \*

#### Volatility:

Boiling point at atmospheric pressure:

Vapour pressure at 20 °C:

Vapour pressure at 50 °C:

Non-applicable \*

Evaporation rate at 20 °C:

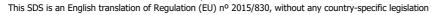
Non-applicable \*

Non-applicable \*

### **Product description:**

Density at 20  $^{\circ}$ C: Non-applicable \* \*Not relevant due to the nature of the product, not providing information property of its hazards.

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### **Liqcreate - Flexible-X**

SECTIO	N 9: PHYSICAL AND CHEMICAL PROPERTIE	S (continued)
Re	elative density at 20 °C:	Non-applicable *
Dy	ynamic viscosity at 20 °C:	Non-applicable *
Ki	nematic viscosity at 20 °C:	Non-applicable *
Ki	nematic viscosity at 40 °C:	>20,5 cSt
Co	oncentration:	Non-applicable *
рŀ	<del>1</del> :	≈6 - 8 (at 100 %)
Va	apour density at 20 °C:	Non-applicable *
Pa	artition coefficient n-octanol/water 20 °C:	Non-applicable *
Sc	olubility in water at 20 °C:	
Sc	olubility properties:	Non-applicable *
De	ecomposition temperature:	Non-applicable *
Me	elting point/freezing point:	Non-applicable *
Ex	plosive properties:	Non-applicable *
O	xidising properties:	Non-applicable *
Fl	ammability:	
Fla	ash Point:	Non Flammable (>60 °C)
He	eat of combustion:	Non-applicable *
Fla	ammability (solid, gas):	Non-applicable *

380 °C

Non-applicable \*

Non-applicable \*

Non-applicable \*

Non-applicable \*

Explosive:

Lower explosive limit:
Upper explosive limit:

Autoignition temperature:

Lower flammability limit:

Upper flammability limit:

9.2 Other information:

Surface tension at 20 °C:

Refraction index:

Non-applicable \*

Non-applicable \*

\*Not relevant due to the nature of the product, not providing information property of its hazards.

### SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

### 10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

### 10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

### 10.4 Conditions to avoid:

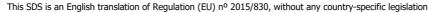
Applicable for handling and storage at room temperature:

Sh	nock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
	Not applicable	Not applicable	Precaution	Precaution	Not applicable

### 10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

### 10.6 Hazardous decomposition products:





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### SECTION 10: STABILITY AND REACTIVITY (continued)

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

#### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

#### **Dangerous health implications:**

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

- A- Ingestion (acute effect):
  - Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
  - Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- B- Inhalation (acute effect):
  - Acute toxicity: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous for inhalation. For more information see section 3.
  - Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as dangerous for this effect. For more information see section 3.
- C- Contact with the skin and the eyes (acute effect):
  - Contact with the skin: Produces skin inflammation.
  - Contact with the eyes: Produces eye damage after contact.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
  - Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.
    - IARC: 2,2-bis(acryloyloxymethyl)butyl acrylate (2B); Toluene (3); phenol (3); Carbon black (2B)
  - Mutagenicity: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with mutagenic effects. For more information see section 3.
  - Reproductive toxicity: Based on available data, the classification criteria are not met. However, it does contain substances classified as dangerous for this effect. For more information see section 3.
- E- Sensitizing effects:
  - Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
  - Cutaneous: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.
- F- Specific target organ toxicity (STOT) single exposure:

Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous for inhalation. For more information see section 3.

- G- Specific target organ toxicity (STOT)-repeated exposure:
  - Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.
  - Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- H- Aspiration hazard:

Based on available data, the classification criteria are not met. However, it does contain substances classified as dangerous for this effect. For more information see section 3.

### Other information:

Non-applicable

#### Specific toxicology information on the substances:



Identification	1	Acute toxicity	Genu
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	LD50 oral	5500 mg/kg	Rat
CAS: 75980-60-8	LD50 dermal	Non-applicable	
EC: 278-355-8	LC50 inhalation	Non-applicable	
2,2-bis(acryloyloxymethyl)butyl acrylate	LD50 oral	5500 mg/kg	Rat
CAS: 15625-89-5	LD50 dermal	5170 mg/kg	Rabb
EC: 239-701-3	LC50 inhalation	Non-applicable	
Toluene	LD50 oral	5580 mg/kg	Rat
CAS: 108-88-3	LD50 dermal	12124 mg/kg	Rat
EC: 203-625-9	LC50 inhalation	28,1 mg/L (4 h)	Rat
phenol	LD50 oral	100 mg/kg	Rat
CAS: 108-95-2	LD50 dermal	630 mg/kg	Rabb
EC: 203-632-7	LC50 inhalation	Non-applicable	

### SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

### 12.1 Toxicity:

Identification		Acute toxicity	Species	Genus
(5-ethyl-1,3-dioxan-5-yl)methyl acrylate	LC50	4 mg/L (96 h)	Oncorhynchus mykiss	Fish
CAS: 66492-51-1	EC50	20 mg/L (48 h)	Daphnia magna	Crustacean
EC: 266-380-7	EC50	34 mg/L (72 h)	Desmodesmus subspicatus	Algae
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	LC50	>1 - 10 mg/L (96 h)		Fish
CAS: 75980-60-8	EC50	>1 - 10 mg/L (48 h)		Crustacean
EC: 278-355-8	EC50	>1 - 10 mg/L (72 h)		Algae
2,2-bis(acryloyloxymethyl)butyl acrylate	LC50	0.87 mg/L (96 h)	N/A	Fish
CAS: 15625-89-5	EC50	20 mg/L (48 h)	Dap <mark>hnia magna</mark>	Crustacean
EC: 239-701-3	EC50	4.9 mg/L (96 h)	Desmodesmus subspicatus	Algae
Toluene	LC50	13 mg/L (96 h)	Carassius auratus	Fish
CAS: 108-88-3	EC50	11.5 mg/L (48 h)	Daphnia magna	Crustacean
EC: 203-625-9	EC50	125 mg/L (48 h)	Scenedesmus subspicatus	Algae
phenol	LC50	14 mg/L (96 h)	Leuciscus idus	Fish
CAS: 108-95-2	EC50	12 mg/L (24 h)	Daphnia magna	Crustacean
EC: 203-632-7	EC50	370 mg/L (96 h)	Chlorella vulgaris	Algae

### 12.2 Persistence and degradability:

Identification	De	egradability	Biod	egradability
(5-ethyl-1,3-dioxan-5-yl)methyl acrylate	BOD5	Non-applicable	Concentration	10 mg/L
CAS: 66492-51-1	COD	Non-applicable	Period	28 days
EC: 266-380-7	BOD5/COD	Non-applicable	% Biodegradable	28 %
2,2-bis(acryloyloxymethyl)butyl acrylate	BOD5	Non-applicable	Concentration	Non-applicable
CAS: 15625-89-5	COD	Non-applicable	Period	28 days
EC: 239-701-3	BOD5/COD	Non-applicable	% Biodegradable	90 %
Toluene	BOD5	2,5 g O2/g	Concentration	100 mg/L
CAS: 108-88-3	COD	Non-applicable	Period	14 days
EC: 203-625-9	BOD5/COD	Non-applicable	% Biodegradable	100 %
phenol	BOD5	1,68 g O2/g	Concentration	100 mg/L
CAS: 108-95-2	COD	2,33 g O2/g	Period	14 days
EC: 203-632-7	BOD5/COD	0,72	% Biodegradable	85 %

### 12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
2,2-bis(acryloyloxymethyl)butyl acrylate	BCF	344
CAS: 15625-89-5	Pow Log	4.35
EC: 239-701-3	Potential	High

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### SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification Bioaccumulation potential		
Toluene	BCF	13
CAS: 108-88-3	Pow Log	2.73
EC: 203-625-9	Potential	Low
phenol	BCF	17
CAS: 108-95-2	Pow Log	1.48
EC: 203-632-7	Potential	Low

### 12.4 Mobility in soil:

Identification	Absorption/desorption		Volat	ility
(5-ethyl-1,3-dioxan-5-yl)methyl acrylate	Koc	12	Henry	8,81E-3 Pa·m³/mol
CAS: 66492-51-1	Conclusion	Very High	Dry soil	No
EC: 266-380-7	Surface tension	Non-applicable	Moist soil	No
2,2-bis(acryloyloxymethyl)butyl acrylate	Koc	160	Henry	Non-applicable
CAS: 15625-89-5	Conclusion	High	Dry soil	Non-applicable
EC: 239-701-3	Surface tension	Non-applicable	Moist soil	Non-applicable
Toluene	Koc	178	Henry	672,8 Pa·m³/mol
CAS: 108-88-3	Conclusion	Moderate	Dry soil	Yes
EC: 203-625-9	Surface tension	2,793E-2 N/m (25 °C)	Moist soil	Yes
phenol	Koc	50	Henry	2,2E-2 Pa·m³/mol
CAS: 108-95-2	Conclusion	Very High	Dry soil	Yes
EC: 203-632-7	Surface tension	1,847E-2 N/m (231,01 °C)	Moist soil	Yes

### 12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

### 12.6 Other adverse effects:

Not described

### SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
20 01 27*	paint, inks, adhesives and resins containing hazardous substances	Dangerous

### Type of waste (Regulation (EU) No 1357/2014):

HP14 Ecotoxic, HP13 Sensitising, HP4 Irritant — skin irritation and eye damage

### Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

# $\label{lem:related} \textbf{Regulations related to waste management:}$

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

### **SECTION 14: TRANSPORT INFORMATION**

### Transport of dangerous goods by land:

With regard to ADR 2021 and RID 2021:



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### SECTION 14: TRANSPORT INFORMATION (continued)

14.1 UN number: UN3082

14.2 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((5-

ethyl-1,3-dioxan-5-yl)methyl acrylate)

14.3 Transport hazard class(es):

Labels:

14.4 Packing group: TTT 14.5 Environmental hazards: Yes

14.6 Special precautions for user

Special regulations: 274, 335, 375, 601

Tunnel restriction code:

Physico-Chemical properties: see section 9

Limited quantities: 5 L

14.7 Transport in bulk according to Annex II of Marpol and

the IBC Code:

Non-applicable

#### Transport of dangerous goods by sea:

With regard to IMDG 39-18:

14.1 UN number: UN3082

14.2 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((5-

ethyl-1,3-dioxan-5-yl)methyl acrylate)

14.3 Transport hazard class(es): Labels: 9

14.4 Packing group: III14.5 Marine pollutant: Yes

14.6 Special precautions for user

335, 969, 274 Special regulations: EmS Codes: F-A, S-F

Physico-Chemical properties: see section 9

Limited quantities: 5 L

Non-applicable Segregation group: 14.7 Transport in bulk according Non-applicable

the IBC Code: Transport of dangerous goods by air:

With regard to IATA/ICAO 2021:



14.1 UN number: UN3082

14.2 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((5-

ethyl-1,3-dioxan-5-yl)methyl acrylate)

14.3 Transport hazard class(es): Labels: 9

to Annex II of Marpol and

14.4 Packing group: III14.5 Environmental hazards: Yes

14.6 Special precautions for user

Physico-Chemical properties: see section 9 14.7 Transport in bulk according Non-applicable

to Annex II of Marpol and

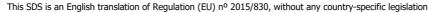
the IBC Code:

### **SECTION 15: REGULATORY INFORMATION**

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

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### SECTION 15: REGULATORY INFORMATION (continued)

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

#### Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
E2	ENVIRONMENTAL HAZARDS	200	500

# Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):

Shall not be used in:

- —ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- -tricks and jokes,
- —games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Occupational exposure to respirable crystalline silica must be controlled pursuant to Directive (EU) 2019/130.

#### Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

#### Other legislation:

The product could be affected by sectorial legislation

#### 15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

### SECTION 16: OTHER INFORMATION

### Legislation related to safety data sheets:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830).

### Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Non-applicable

### Texts of the legislative phrases mentioned in section 2:

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H411: Toxic to aquatic life with long lasting effects.

H319: Causes serious eye irritation.

### Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

### CLP Regulation (EC) No 1272/2008:

Acute Tox. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled.

Aquatic Acute 1: H400 - Very toxic to aquatic life.

Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.

Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Flam. Liq. 2: H225 - Highly flammable liquid and vapour.

Muta. 2: H341 - Suspected of causing genetic defects.

Repr. 2: H361d - Suspected of damaging the unborn child.

Repr. 2: H361f - Suspected of damaging fertility.

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.

Skin Irrit. 2: H315 - Causes skin irritation.

Skin Sens. 1: H317 - May cause an allergic skin reaction.

Skin Sens. 1B: H317 - May cause an allergic skin reaction.

STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.

STOT SE 3: H335 - May cause respiratory irritation.

STOT SE 3: H336 - May cause drowsiness or dizziness.

#### Classification procedure:

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### SECTION 16: OTHER INFORMATION (continued)

Skin Irrit. 2: Calculation method Skin Sens. 1B: Calculation method Aquatic Chronic 2: Calculation method Eye Irrit. 2: Calculation method

### Advice related to training:

Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

### Principal bibliographical sources:

http://echa.europa.eu http://eur-lex.europa.eu

### **Abbreviations and acronyms:**

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5-day biochemical oxygen demand

BCF: Bioconcentration factor LD50: Lethal Dose 50 LC50: Lethal Concentration 50 EC50: Effective concentration 50

Log-POW: Octanol-water partition coefficient Koc: Partition coefficient of organic carbon



The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -

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