

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE COMPANY

1.1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Product name: SMARTMATERIALS RESIN CRYSTAL FLEX
UFI: 4U00-116S-N007-C11F
Product type: Photopolymerizable resin.

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES DISAGREE

Recommended uses: Resin for 3D printing. Additive manufacturing. Exclusive professional user use.
Uses advised against: No information available.

1.3 IDENTIFICATION OF THE COMPANY

SMART MATERIALS 3D PRINTING SL
Polígono Industrial El Retamar · C/ Tomillo 7 – Vial G
23680 Alcalá la Real (Jaén) SPAIN
☎ +34 953 041 993
☎ +34 953 113 527
info@smartmaterials3d.com
www.smartmaterials3d.com

1.4 EMERGENCY CONTACT

Emergency phone: 112

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 4: Hazardous to the aquatic environment, long-term hazard, Category 4, H413 Skin Sens. 1B: Sensitisation, skin, Category 1B, H317

2.2 LABEL ELEMENTS

Symbols / Pictograms:



Warning words:

Warning

Hazard statements:

Aquatic Chronic 2: H411 – Toxic to aquatic life with long lasting effects.
Eye Irrit 2: H319 – Cause serious eye irritation.
Skin Irrit. 2: H315 – Cause skin irritation.
Skin Sens. 1B: H317 – May cause an allergic skin reaction.

Cautionary advice:

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: 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 skin irritation or rash occurs: 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.

UFI: 4U00-116S-N007-C11F

2.3 OTHER HAZARDS:

Product fails to meet PBT/vPvB criteria

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 SUBSTANCE

Non-applicable.

3.2 CHEMICAL CHARACTERIZATION: MIXTURES

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

Chemical name/Classification		Identification		%	
Regulation 1272/2008	(5-ethyl-1,3-dioxan-5-yl) methyl acrylate ⁽¹⁾ Aquatic Chronic 2: H411; Skin Irrit. 2: H315; Skin Sens. 1B: H317 - Warning	Self-classified	CAS:	66492-51-1	30 - 40
			CE:	266-380-7	
			Index:	607-133-00-9	
			REACH:	01-2119976303-36-XXXX	
Regulation 1272/2008	Urethane Arylate Oligomer ⁽¹⁾ Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning	ATP CLP00	CAS:	Non- applicable	9 - 30
			CE:	944-664-8	
			Index:	Non- applicable	
			REACH:	Non-applicable	
Regulation 1272/2008	Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate ⁽¹⁾ Eye Irrit. 2: H319; Skin Irrit. 2: H315; STOT SE 3: H335 - Warning	ATP CLP00	CAS:	7534-94-3	3 - 9
			CE:	231-403-1	
			Index:	607-134-00-4	
			REACH:	01-2119886505-27-XXXX	
Regulation 1272/2008	Diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide ⁽¹⁾ Aquatic Chronic 2: H411; Repr. 2: H361f; Skin Sens. 1B: H317 - Warning	Self-classified	CAS:	75980-60-8	2 - 2.5
			CE:	278-355-8	
			Index:	015-203-00-X	
			REACH:	01-2119972295-29-XXXX	
Regulation 1272/2008	2,2-bis(acryloyloxymethyl)butyl acrylate ⁽¹⁾ Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Warning	Self-classified	CAS:	15625-89-5	0.5 - 2
			CE:	239-701-3	
			Index:	607-111-00-9	
			REACH:	01-2119489896-11-XXXX	
Regulation 1272/2008	Diisodecyl phenyl phosphite ⁽¹⁾ Skin Sens. 1: H317 - Warning	Self-classified	CAS:	25550-98-5	0.01 - 0.5
			CE:	247-098-3	
			Index:	Non-applicable	
			REACH:	01-2119962888-14-XXXX	
Regulation 1272/2008	Toluene ⁽²⁾ Asp. Tox. 1: H304; Flam. Liq. 2: H225; Repr. 2: H361d; Skin Irrit. 2: H315; STOT RE2: H373; STOT SE 3: H336 - Danger	ATP CLP00	CAS:	108-88-3	0.01 - 0.1
			CE:	203-625-9	
			Index:	601-021-00-3	
			REACH:	01-2119471310-51-XXXX	
Regulation 1272/2008	N-butyl acetate ⁽²⁾ Flam. Liq. 3: H226; STOT SE 3: H336; EUH066 - Warning	ATP CLP00	CAS:	123-86-4	<0.01
			CE:	204-658-1	
			Index:	607-025-00-1	
			REACH:	01-2119458493-29-XXXX	
Regulation 1272/2008	Phenol ⁽²⁾ Acute Tox. 3: H301+H331; Muta. 2: h341; Skin Corr. 1B: H314; STOT RE 2: H373 - Danger	ATP CLP00	CAS:	108-95-2	<0.01
			CE:	203-632-7	
			Index:	604-001-00-2	
			REACH:	01-2119471329-32-XXXX	

⁽¹⁾ 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

SECTION 4. FIRS AID MEASURES

4.1 DESCRIPTION OF FIRS AID MEASURES

- By eye contact** : In case of irritation caused by the fumes, rinse immediately with plenty of water, also under the eyelids. If symptoms persist, contact your doctor.
- By skin contact** : May produce an allergic reaction on the skin. In case of contact, it is recommended to clean the affected area with water by dragging and with neutral soap. In case of skin changes (itching, redness, rashes, blisters ...), go to a doctor with this Safety Data Sheet.
- By inhalation** : It is a product not classified as dangerous by inhalation, however, in case of symptoms of poisoning it is recommended to remove the affected person from the place of exposure, supply them with clean air and keep them at rest. Seek medical attention if symptoms persist.
- By ingestion** : Do not induce vomiting, if it occurs keep the head tilted forward to avoid aspiration. Keep the patient at rest. Rinse the mouth and throat, as there is a possibility that they have been affected on ingestion.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, ACUTE AND DELAYED

Acute and delayed effects are listed in Sections 2 and 11.

4.3 INDICATIONS FOR MEDICAL ATTENTION AND SPECIAL TREATMENTS THAT SHOULD BE GIVEN IMMEDIATELY

No hay information available

SECTION 5. FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

- Suitable extinguishing media** : Non-flammable product under normal conditions of storage, handling, and use, containing flammable substances. In case of ignition because of handling, storage or improper use, preferably use multipurpose powder extinguishers (ABC powder), in accordance with the Regulation of fire protection installations (R.D. 513/2017 and subsequent modifications).
- Unsuitable extinguishing media** : It is recommended not to use full jet water as an extinguishing agent.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Because of combustion or thermal decomposition, reaction by-products are generated that can be highly toxic and, consequently, can present a high risk to health.

5.3 ADVICE FOR FIREFIGHTER

- Instructions** : No fighting instruction is required.
- Special protective equipment for firefighters** : As in any fire, wear MSHA / NIOSH pressure-demand self-contained breathing apparatus (approved or equivalent) and all necessary protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

- For personnel who are not part of the emergency services** : Isolate leaks if it does not pose an additional risk to persons performing this function. Evacuate the area and keep unprotected people away. In the event of potential contact with the spilled product, the use of personal protection elements is mandatory (see SECTION 8). Avoid as a priority the formation of flammable vapor-air mixtures, either through ventilation or the use of an inerting agent. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all conductive surfaces on which static electricity can form, while the assembly is grounded.
- For emergency personnel** : Wear with appropriate personal protective equipment (see SECTION 8).

6.2 ENVIRONMENTAL PRECAUTIONS

Avoid at all costs any type of spillage into the aquatic environment. Adequately contain the absorbed / collected product in hermetically sealable containers. Notify the competent authority in the event of exposure to the public or the environment.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING

It is recommended:

Absorb spillage with sand or inert absorbent and move to a safe place. Do not absorb in sawdust or other combustible absorbents. For any consideration regarding disposal, consult SECTION 13.

SECTION 7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

- General precautions** : Comply with current legislation on the prevention of occupational hazards. Keep containers tightly closed. Control spills and residues, eliminating them with safe methods (SECTION 6). Avoid free spillage from container. Maintain order and cleanliness where dangerous products are handled.
- Technical recommendations for the prevention of fires and explosions** : Avoid evaporation of the product as it contains flammable substances, which can form flammable vapor / air mixtures in the presence of ignition sources. Control ignition sources (mobile phones, sparks ...) and transfer at slow speeds to avoid the generation of electrostatic charges. Consult SECTION 10 on conditions and materials to avoid.
- Technical recommendations to prevent ergonomic and toxicological hazards** : For exposure control consult SECTION 8. Do not eat, drink, or smoke in work areas; wash hands after each use and remove contaminated clothing and protective equipment before entering eating areas.
- Technical recommendations to prevent environmental risks** : Due to the danger of this product for the environment, it is recommended to handle it within an area that has pollution control barriers in case of spillage, as well as to have absorbent material in the vicinity of it.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

- Requirements for the warehouse and containers** : Store in a dry place, protect from sunlight, store between 5°C and 30°C.
- Rules for joint storage** : Not necessary.
- Additional information on storage conditions** : Store in tightly closed containers in a cool, dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Substances whose occupational exposure limits must 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		
	IOELV (8h)		
Toluene CAS: 108-88-3 CE: 203-625-9	IOELV (8h)	50 ppm	192 mg/m ³
	IOELV (STEL)	100 ppm	384 mg/m ³
N-butyl acetate CAS: 123-86-4 CE: 204-658-1	IOELV (8h)	50 ppm	241 mg/m ³
	IOELV (STEL)	150 ppm	723 mg/m ³
Phenol CAS: 108-95-2 CE: 203-632-7	IOELV (8h)	2 ppm	8 mg/m ³
	IOELV (STEL)	4 ppm	16 mg/m ³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Exo-1,7,7-trimethylbicyclo [2.2.1] hept-2-yl methacrylate CAS: 7564-94-3 CE: 231-403-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,35 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1,22 mg/m ³	Non-applicable
Diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide CAS: 75980-60-8 CE: 278-355-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,233 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,822 mg/m ³	Non-applicable
2,2-bis(acryloyloxymethyl)butyl acrylate CAS: 15625-89-5 CE: 239-701-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	83 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	3,5 mg/m ³	Non-applicable
diisodecyl phenyl phosphite CAS: 108-88-33 CE: 203-625-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	50 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	70,5 mg/m ³	Non-applicable
Toluene CAS: 108-88-33 CE: 203-625-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	384 mg/kg	Non-applicable
	Inhalation	384 mg/m ³	384 mg/m ³	192 mg/m ³	192 mg/m ³
N-butyl acetate CAS: 108-88-33 CE: 203-625-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	11 mg/kg	Non-applicable	11 mg/kg	Non-applicable
	Inhalation	600 mg/m ³	600 mg/m ³	300 mg/m ³	300 mg/m ³
Phenol CAS: 108-95-2 CE: 203-632-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1,23 mg/kg	Non-applicable
	Inhalation	Non-applicable	16 mg/m ³	8 mg/m ³	Non-applicable



DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Exo-1,7,7-trimethylbicyclo [2.2.1] hept-2-yl methacrylate CAS: 7564-94-3 CE: 231-403-1	Oral	Non-applicable	Non-applicable	0,21 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,21 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,36 mg/m ³	Non-applicable
Diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide CAS: 75980-60-8 CE: 278-355-8	Oral	Non-applicable	Non-applicable	0,0833 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,0833 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,145 mg/m ³	Non-applicable
2,2-bis(acryloyloxymethyl)butyl acrylate CAS: 15625-89-5 CE: 239-701-3	Oral	Non-applicable	Non-applicable	0,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	42 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,87 mg/m ³	Non-applicable
Toluene CAS: 108-88-33 CE: 203-625-9	Oral	Non-applicable	Non-applicable	8,13 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	226 mg/kg	Non-applicable
	Inhalation	226 mg/m ³	226 mg/m ³	56,5 mg/m ³	56,5 mg/m ³
N-butyl acetate CAS: 108-88-33 CE: 203-625-9	Oral	2 mg/kg	Non-applicable	2 mg/kg	Non-applicable
	Dermal	6 mg/kg	Non-applicable	6 mg/kg	Non-applicable
	Inhalation	300 mg/m ³	300 mg/m ³	35,6 mg/m ³	35,7 mg/m ³
Phenol CAS: 108-95-2 CE: 203-632-7	Oral	Non-applicable	Non-applicable	0,4 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,4 mg/kg	Non-applicable
	Inhalation	Non-applicable	16 mg/m ³	1,32 mg/m ³	Non-applicable

PNEC:

Identification				
(5-ethyl-1,3-dioxan-5-yl) methyl acrylate CAS: 66492-51-1 CE: 266-380-7	STP	30 mg/L	Water	0.004 mg/L
	Soil	0.001 mg/kg	Marine water	0 mg/L
	Intermittent	0.04 mg/L	Sediment (Water)	0.019 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.002 mg/kg
Exo-1,7,7-trimethylbicyclo [2.2.1] hept-2-yl methacrylate CAS: 7564-94-3 CE: 231-403-1	STP	2.45 mg/L	Water	0.00233 mg/L
	Soil	0.239 mg/kg	Marine water	0.000233 mg/L
	Intermittent	0.0179 mg/L	Sediment (Water)	1.2 mg/kg
Diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide CAS: 75980-60-8 CE: 278-355-8	Oral	Non-applicable	Sediment (Marine water)	0.12 mg/kg
	Soil	0,0222 mg/Kg	Marine water	0,00014 mg/L
	Intermittent	0,014 mg/L	Sediment (Water)	0.115 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.0115 mg/kg
2,2-bis(acryloyloxymethyl)butyl acrylate CAS: 15625-89-5 CE: 239-701-3	STP	6.25 mg/L	Water	0.00087 mg/L
	Soil	0.003 mg/kg	Marine water	0.000087 mg/L
	Intermittent	0.0087 mg/L	Sediment (Water)	0.017 mg/Kg
	Oral	0.01 g/kg	Sediment (Marine water)	0.002 mg/Kg
Toluene CAS: 108-88-33 CE: 203-625-9	STP	13.61 mg/L	Water	0.68 mg/L
	Soil	2.89 mg/kg	Marine water	0.68 mg/L
	Intermittent	0.68 mg/L	Sediment (Water)	16.39 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	16.39 mg/kg
N-butyl acetate CAS: 108-88-33 CE: 203-625-9	STP	35.6 mg/L	Water	0.18 mg/L
	Soil	0.09 mg/kg	Marine water	0.018 mg/L
	Intermittent	0.36 mg/L	Sediment (Water)	0.981 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.098 mg/kg

Phenol CAS: 108-95-2 CE: 203-632-7	STP	2.1 mg/L	Water	0.18 mg/L
	Soil	0.136 mg/kg	Marine water	0.008 mg/L
	Intermittent	0.031 mg/L	Sediment (Water)	0.091mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.009 mg/kg

8.2 EXPOSURE CONTROL

A.- Individual protection measures, such as personal protective equipment

As a preventive measure, the use of basic personal protective equipment is recommended, with the corresponding CE marking in accordance with R.D. 1407/1992 and subsequent modifications. For more information on personal protective equipment (storage, use, cleaning, maintenance, protection class ...) consult the information leaflet provided by the PPE manufacturer. The indications contained in this point refer to the pure product. The protection measures for the diluted product may vary depending on its degree of dilution, use, application method, etc. To determine the obligation to install emergency showers and / or eyewashes in warehouses, the regulations regarding the storage of chemical products applicable in each case will be considered. For more information see sections 7.1 and 7.2.

All the information included here is a recommendation, and it is necessary to specify it by the occupational risk prevention services as it is not aware of the additional prevention measures that the company may have or if they have been included in the relevant risk assessment.

B.- Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Observations
 Mandatory respiratory tract protection	Self-filtering mask for gases and vapours (Filter type: FFP2)		EN 405:2002+A1:2010	Replace when the odor or taste of the contaminant is detected inside the mask or face adapter. When the pollutant does not have good warning properties, the use of insulating equipment is recommended.
 Mandatory respiratory tract protection	Self-filtering mask for gases and vapors (Filter type: A)		EN 405:2002+A1:2010	Replace when the odor or taste of the contaminant is detected inside the mask or face adapter. When the pollutant does not have good warning properties, the use of insulating equipment is recommended.

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Observations
 Mandatory hand protection	Protective gloves against minor risks (Material: Nitrile)		EN 420:2004 A1:2010 EN ISO 374-1:2016 A1:2018	Replace the gloves at any sign of deterioration. For prolonged periods of exposure to the product for professional / industrial users, the use of CE III gloves is recommended.

Since the product is a mixture of different materials, the resistance of the glove material cannot be calculated in advance with complete reliability and therefore must be checked before application.

D.- Ocular and facial protection

Pictogram	PPE	Labelling	CEN Standard	Observations
 Mandatory face protection	Goggles against splashes and / or projections		EN 166:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Its use is recommended in case of risk of splashing.

E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Observations
	Work clothing		EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994	Replace before any indication of deterioration. For prolonged periods of exposure to the product for professional / industrial users CE III is recommended.
	Anti-slip work shoes		EN ISO 20347:2012	Replace before any indication of deterioration. For prolonged periods of exposure to the product for professional / industrial users CE III is recommended,

E.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

Under Community environmental protection legislation, it is recommended to avoid spilling both the product and its packaging into the environment. For additional information see section 7.1.D

Volatile organic compounds:

In application to R.D. 117/2003 and subsequent modifications (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:	6,98
Average molecular weight:	92,5 g/mol

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid
Appearance	: Viscous
Colour	: Colourless
Odour	: Resin

Kinematic viscosity at 40°C	: <20,5 mm ² /s
pH	: 6 – 8 (al 100%)
Flash point	: Non-flammable (>60°C)
Autoignition temperature	: 260 °C

9.2 OTHER INFORMATION

Non available

SECTION 10. STABILITY AND REACTIVITY

10.1 REACTIVITY

None are expected under normal use conditions.

10.2 CHEMYCAL STABILITY

Stable under recommended storage conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

None are expected under normal use conditions.

10.4 CONDITIONS TO AVOID

Caution against overheating. Caution against sunlight. Prolonged exposure will cause product degradation.

10.5 INCOMPATIBLE MATERIALS

Avoid strong acids.

Avoid alkalis or strong bases.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

See SECTION 5.2

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

There are no experimental data on the product itself regarding toxicological properties.

Dangerous effects for health:

In case of repetitive or prolonged exposure or at concentrations higher than those established by the occupational exposure limits, adverse health effects may occur depending on the route 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 ingestion. For more information see SECTION 3.
- Corrosivity / Irritability: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for this effect. For more information see SECTION 3.
-

B- Inhalation (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous by Inhalation. For more information see SECTION 3.
- Corrosivity / Irritability: Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for this effect. For more information see SECTION 3.

C- Contact with skin and eyes (acute effect):

- Contact with the skin: Based on the available data, the classification criteria are not met, however, it contains substances classified as dangerous for contact with the skin. For more information see SECTION 3.
- Eye contact: 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.

D- CMR effects (carcinogenicity, mutagenicity y toxicity for reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects described. For more information see SECTION 3. IARC: 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 contains substances classified as dangerous for this effect. For more information see SECTION 3.

E- Sensitizing effect:

- Respiratory: Based on the available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitizing effects above the limits set forth in point 3.2 of Regulation (EC) 2015/830. For more information see sections 2, 3 and 15.
Dermal: Prolonged contact with the skin can lead to PPE sodium from allergic contact dermatitis.

F- Specific Target Organ Toxicity (STOT)-single exposure:

Based on available data, the classification criteria are not met, however, it does contain substances classified as dangerous by 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 contains substances classified as dangerous by 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.

Specific toxicological information of the substances:

Identification	Acute toxicity		Genus
2,2-bis(acryloyloxymethyl)butyl acrylate CAS: 15625-89-5 CE: 239-701-3	DL50 oral	5500 mg/kg	Rat
	DL50 Dermal	5170 mg/kg	Rabbit
	DL50 Inhalation	Non-applicable	
Diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide CAS: 75980-60-8 CE: 278-355-8	DL50 oral	5500 mg/kg	Rat
	DL50 Dermal	Non-applicable	
	DL50 Inhalation	Non-applicable	
Toluene CAS: 108-88-33 CE: 203-625-9	DL50 oral	5580 mg/kg	Rat
	DL50 Dermal	12124 mg/kg	Rat
	DL50 Inhalation	28,1 mg/L (4 h)	Rat
N-butyl acetate CAS: 108-88-33 CE: 203-625-9	DL50 oral	12789 mg/kg	Rat
	DL50 Dermal	14112 mg/kg	Rabbit
	DL50 Inhalation	23,4 mg/L (4 h)	Rat

Phenol CAS: 108-95-2 CE: 203-632-7	DL50 oral	100 mg/kg	Rat
	DL50 Dermal	630 mg/kg	Rabbit
	DL50 Inhalation	Non-applicable	

SECTION 12. ECOLOGICAL INFORMATION

12.1 TOXICITY

Identification	Acute toxicity		Species	Genus
	LC50			
(5-ethyl-1,3-dioxan-5-yl) methyl acrylate CAS: 66492-51-1 CE: 266-380-7	LC50	4 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	20 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	34 mg/L (72 h)	Desmodesmus subspicatus	Algae
Diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide CAS: 75980-60-8 CE: 278-355-8	LC50	>1 - 10 (96 h)		Fish
	EC50	>1 - 10 (48 h)		Crustacean
	EC50	>1 - 10 (72 h)		Algae
2,2-bis(acryloyloxymethyl)butyl acrylate CAS: 15625-89-5 CE: 239-701-3	LC50	0.87 mg/L (96 h)	N/A	Fish
	EC50	20 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	4.9 mg/L (96 h)	Desmodesmus subspicatus	Algae
Toluene CAS: 108-88-33 CE: 203-625-9	LC50	13 mg/L (96 h)	Oncorhynchus kisutch	Fish
	EC50	11.5 mg/L (48 h)	Ceriodaphnia dubia	Crustacean
	EC50	125 mg/L (48 h)	Scenedesmus subspicatus	Algae
N-butyl acetate CAS: 108-88-33 CE: 203-625-9	LC50	Non-applicable		
	EC50	Non-applicable		
	EC50	675 mg/L (72 h)	Scenedesmus subspicatus	Algae
Phenol CAS: 108-95-2 CE: 203-632-7	LC50	14 mg/L (96 h)	Leuciscus idus	Fish
	EC50	12 mg/L (24 h)	Daphnia magna	Crustacean
	EC50	370 mg/L (96 h)	Chlorella vulgaris	Algae

Chronic toxicity:

Identification	Acute toxicity		Species	Genus
	NOEC			
N-butyl acetate CAS: 108-88-33 CE: 203-625-9	NOEC	Non-applicable		
	NOEC	23.2 mg/L	Daphnia magna	Crustacean
Phenol CAS: 108-95-2 CE: 203-632-7	NOEC	0.077 mg/L	Cirrhina mrigala	Fish
	NOEC	0.16 mg/L	Daphnia magna	Crustacean

12.2 PERSISTENCE AND DEGRADABILITY

Identification	Degradability		Biodegradability	
(5-ethyl-1,3-dioxan-5-yl) methyl acrylate CAS: 66492-51-1 CE: 266-380-7	BOD5	Non-applicable	Concentration	10 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	28 %
2,2-bis(acryloyloxymethyl)butyl acrylate CAS: 15625-89-5 CE: 239-701-3	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	28 días
	BOD5/COD	Non-applicable	% Biodegradable	90 %
Toluene CAS: 108-88-33 CE: 203-625-9	BOD5	2,5 g O2/g	Concentration	100 mg/L
	COD	Non-applicable	Period	14 días
	BOD5/COD	Non-applicable	% Biodegradable	100 %
N-butyl acetate CAS: 108-88-33 CE: 203-625-9	BOD5	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	5 días
	BOD5/COD	Non-applicable	% Biodegradable	84 %



Phenol CAS: 108-95-2 CE: 203-632-7	BOD5	1,68 g O2/g	Concentration	100 mg/L
	COD	2,33 g O2/g	Period	14 días
	BOD5/COD	0,72	% Biodegradable	85 %

12.3 BIOACCUMULATIVE POTENTIAL

Identification	Bioaccumulation potential	
2,2-bis(acryloyloxymethyl)butyl acrylate CAS: 15625-89-5 CE: 239-701-3	BCF	344
	Pow Log	4.35
	Potential	High
Toluene CAS: 108-88-33 CE: 203-625-9	BCF	13
	Pow Log	2,73
	Potential	Low
N-butyl acetate CAS: 108-88-33 CE: 203-625-9	BCF	4
	Pow Log	1.78
	Potential	Low
Phenol CAS: 108-95-2 CE: 203-632-7	BCF	17
	Pow Log	1.48
	Potential	Low

12.4 MOBILITY IN SOIL

Identification	Absorption/Desorption		Volatility	
(5-ethyl-1,3-dioxan-5-yl) methyl acrylate CAS: 66492-51-1 CE: 266-380-7	Koc	12	Henry	8,81E-2 Pa*m ³ /mol
	Conclusion	Very high	Dry soil	No
	Surface tension	Non-applicable	Moist soil	No
2,2-bis(acryloyloxymethyl)butyl acrylate CAS: 15625-89-5 CE: 239-701-3	Koc	160	Henry	Non-applicable
	Conclusion	High	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable
Toluene CAS: 108-88-33 CE: 203-625-9	Koc	178	Henry	672,8 Pa*m ³ /mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	2,478E-2 N/m (25 °C)	Moist soil	Yes
N-butyl acetate CAS: 108-88-33 CE: 203-625-9	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,478E-2 N/m (25 °C)	Moist soil	Non-applicable
Phenol CAS: 108-95-2 CE: 203-632-7	Koc	50	Henry	2,2E-2 Pa*m ³ /mol
	Conclusion	Very high	Dry soil	Yes
	Surface tension	1,847E-2 N/m (231,01 °C)	Moist soil	Yes

12.5 RESULTS OF PBT AND vPvB ASSESSMENT

Non-applicable

12.6 OTHERS ADVERSE EFFECTS

No information available

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Code	Description	Waste class (Regulation (EU) n° 1357/2014)
20 01 27*	Paint, inks, adhesives, and resins containing hazardous substances	Dangerous

Type of waste (Regulation (UE) n° 1357/2014):

HP14 Ecotoxic

Waste management (disposal and evaluation):

Consult the authorized waste manager for recovery and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98 / EC, Law 22/2011). According to codes 15 01 (2014/955 / EU), if the container has been in direct contact with the product, it will be managed in the same way as the product itself, otherwise it will be managed as non-hazardous waste. Dumping into water courses is discouraged. See section 6.2.

Legislative provisions 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 included.

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

National legislation: Law 22/2011, Royal Decree 180/2015, Law 11/1997

SECTION 14. TRANSPORT INFORMATION

Transport of dangerous goods by land:

Regarding to ADR 2021 and RID 2021:

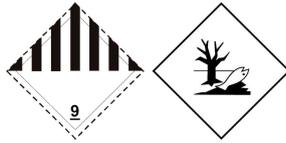


14.1 UN number	UN3082
14.2 UN proper shipping name:	ENVIRONMETALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S ((5-ethyl-1,3-dioxan-5-yl)methyl acrylate)
14.3 Transport hazard class(es):	9
Labels:	9
14.4 Packing group:	III
14.5 Environmental hazards:	Yes
14.6 Special precaution for user:	
Special regulations:	274, 335, 375, 601
Tunner 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:

Regarding to IMDG 39-18:

14.1 UN number	UN3082
14.2 UN proper shipping name:	ENVIRONMETALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S ((5-ethyl-1,3-dioxan-5-yl)methyl acrylate)



14.3 Transport hazard class(es): 9
Labels: 9
14.4 Packing group: III
14.5 Environmental hazards: Yes
14.6 Special precaution for user:
 Special regulations: 335, 969, 274
 Tunner restriction code: F-A, S-F
 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 air:

Regarding to IATA/ICAO 2021:



14.1 UN number UN3082
14.2 UN proper shipping name: ENVIRONMETALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S ((5-ethyl-1,3-dioxan-5-yl)methyl acrylate)
14.3 Transport hazard class(es): 9
Labels: 9
14.4 Packing group: III
14.5 Environmental hazards: Yes
14.6 Special precaution for user:
 Physico-Chemical properties: See section 9
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

SECTION 15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL STANDARDS / LEGISLATION SPECIFIC TO THE SUBSTANCE OF THE MIXTURE

Candidate substances for authorization in Regulation (EC) 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH (authorization list) and expiration date: non-applicable

Regulation (EC) 1005/2009, on substances that deplete the ozone layer: non-applicable

Active substances which have been included in Article 95 of Regulation (EU) No. 528/2012: Non-applicable

REGULATION (EU) No 649/2012, relative to the export and import of dangerous chemical products: non-applicable

Restrictions on the marketing and use of certain dangerous substances and mixtures (Annex XVII of the REACH regulation, etc. ...):

Shall not be used in:

- Decorative items intended to produce lighting or colour effects obtained through different phases, for example, ambient lamps and ashtrays,
- Fun and joke articles,
- Games for one or more participants or any item that is going to be used as such, even with a decorative character.

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

Specific provisions regarding the protection of people or the environment:

It is recommended to use the information collected in this safety data sheet as input data in a risk assessment of local circumstances to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

Regulation (EC) No. 1272/2008 of the European Parliament and of the Council, of December 16, 2008, on classification, labelling and packaging of substances and mixtures, and which modifies and repeals Directives 67/548 / EEC and 1999 / 45 / EC and Regulation (EC) No. 1907/2006 and all its subsequent amendments are amended.

15.2 CHEMICAL SAFETY ASSESSMENT

The supplier has not carried out evaluation of chemical safety.

SECTION 16. OTHER INFORMATION

Legislation applicable to safety data sheets:

This safety data sheet has been developed in accordance with ANNEX II-Guide for the preparation of Safety Data Sheets of Regulation (CE) No. 1907/2006 (Regulation (EU) No. 2015/830)

Modifications with respect to the previous safety data sheet that affect risk management measures:

Non-applicable

Texts of the legislative phrases contemplated in SECTION 2:

H413: May be harmful to aquatic life with long lasting effects.
H317: May cause an allergic skin reaction.
H411: Toxic to aquatic life with long lasting effects.
H319: Cause serious eye irritation.

Texts of the legislative phrases contemplated in SECTION 3:

The phrases indicated do not refer to the product itself, they are for information only and refer to the individual components that appear in SECTION 3

Regulation nº1272/2008 (CLP):

Acute Tox. 3: H301 + H311 + H331 - Toxic if swallowed, in contact with skin or Inhalation.
Aquatic Acute 1: H400 - Very toxic to aquatic organisms.
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.
Flam. Liq. 2: H226 - Flammable liquid and vapour.
Mutates. 2: H341 - Suspected of causing genetic defects.
Repr. 2: H361d - Suspected of damaging the fetus.
Repr. 2: H361f - Suspected of damaging fertility.
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
Skin Irrit. 2: H315 - Causes Dermal 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 RE 2: H335 - May cause respiratory irritation.
STOT SE 3: H336 - May cause drowsiness or dizziness.

Classification procedure:

Skin Irrit. 2: Calculation method
Skin Sens. 1B: Calculation method
Aquatic Chronic 4: Calculation method
Eye Irrit. 2: Calculation method

Advice regarding training:

Minimum training in occupational risk prevention is recommended for the personnel who are going to handle this product, to facilitate the understanding and interpretation of this safety data sheet, as well as the labelling of the product.

Main bibliographic sources:

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

Abbreviations and acronyms:

ADR: European Agreement on the International Transport of Dangerous Goods by Road
IMDG: International Maritime Dangerous Goods Code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
COD: Chemical Oxygen Demand
BOD5: Biological Oxygen Demand at 5 days
BCF: Bioconcentration Factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective Concentration 50
Log POW: Logarithm Octanol Water Partition Coefficient
Koc: Organic Carbon Partition Coefficient
SDS: Safety Data Sheet
UFI: unique formula identifier
IARC: International Agency for Research on Cancer



smart ma

The data that can be extracted from this safety data sheet is based on the current state of our knowledge, this information should be treated as a guide for transport, safe storage, and handling. The information provided does not constitute any guarantee of the product's qualities. Furthermore, it is the user's responsibility to handle the product in accordance with local regulations and standards.

The information provided in this security sheet does not generate any contractual legal relationship.