


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

- 1.1 Product identifier:** DB 8820 - Duobond Pit Fill
- Other means of identification:**
UFI: R8ES-W00F-000D-052S
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant uses: Adhesive for glass. For professional users 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:**
DB-Imagineering BV
Laarakkerweg 10
5061 JR Oisterwijk - Netherlands
Phone: 0135444440
info@db-img.com
www.duobond.com
DB Imagineering is part of Groupe VSF.
- 1.4 Emergency telephone number:** in case of emergency: 999

SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):
Classification of this product has been carried out in accordance with GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567).
Acute Tox. 4: Acute toxicity on contact with skin, Category 4, H312
Aquatic Acute 1: Hazardous to the aquatic environment, acute hazard, Category 1, H400
Aquatic Chronic 1: Hazardous to the aquatic environment, long-term hazard, Category 1, H410
Eye Irrit. 2: Eye irritation, Category 2, H319
Skin Irrit. 2: Skin irritation, Category 2, H315
Skin Sens. 1A: Sensitisation, skin, Category 1A, H317
STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335
- 2.2 Label elements:**
GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):
Warning
- 
- Hazard statements:**
Acute Tox. 4: H312 - Harmful in contact with skin.
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Skin Irrit. 2: H315 - Causes skin irritation.
Skin Sens. 1A: H317 - May cause an allergic skin reaction.
STOT SE 3: H335 - May cause respiratory irritation.
- Precautionary statements:**
P264: Wash thoroughly after use.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/face protection/protective clothing/respiratory protection/protective footwear.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P501: Dispose of the contents and/or its container in line with regulations on dangerous waste or packaging and waste packaging respectively.
- Supplementary information:**

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SECTION 2: HAZARDS IDENTIFICATION (continued)

Contains 2-hydroxyethyl acrylate.

Substances that contribute to the classificationExo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate; (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate;
Methacrylic acid**2.3 Other hazards:**

Product does not meet PBT/vPvB criteria







SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Non-applicable

3.2 Mixture:**Chemical description:** Acrylic resin**Components:**

In accordance with Annex II of The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 5888-33-5	Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Skin Sens. 1A: H317 - Warning	 25 - <50 %
CAS: 42978-66-5	(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate Aquatic Chronic 2: H411; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT SE 3: H335 - Warning	 10 - <25 %
CAS: 7473-98-5	2-hydroxy-2-methylpropiophenone Acute Tox. 4: H302; Aquatic Chronic 3: H412 - Warning	 5 - <10 %
CAS: 79-41-4	Methacrylic acid Acute Tox. 3: H311; Acute Tox. 4: H302+H332; Eye Dam. 1: H318; Skin Corr. 1A: H314; STOT SE 3: H335 - Danger	 <1 %
CAS: 79-92-5	Camphene Aquatic Chronic 1: H410; Eye Irrit. 2: H319; Flam. Sol. 2: H228 - Warning	 <1 %
CAS: 818-61-1	2-hydroxyethyl acrylate Acute Tox. 3: H311; Acute Tox. 4: H302; Aquatic Acute 1: H400; Eye Dam. 1: H318; Skin Corr. 1B: H314; Skin Sens. 1: H317 - Danger	 <1 %

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

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acute toxicity		Genus
Methacrylic acid CAS: 79-41-4	LD50 oral	1320 mg/kg	Rat
	LD50 dermal	500 mg/kg	Rabbit
	LC50 inhalation	Not relevant	
2-hydroxy-2-methylpropiophenone CAS: 7473-98-5	LD50 oral	1694 mg/kg	Rat
	LD50 dermal	Not relevant	
	LC50 inhalation	Not relevant	
2-hydroxyethyl acrylate CAS: 818-61-1	LD50 oral	Not relevant	
	LD50 dermal	300 mg/kg	Rabbit
	LC50 inhalation	Not relevant	

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:

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SECTION 4: FIRST AID MEASURES (continued)

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

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:

Not relevant

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

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

Unsuitable extinguishing media:

Non-applicable

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, ...).

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:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

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.- General precautions for safe use

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

It is recommended to transfer at a slow speed to avoid the creation of electrostatic charges that could affect flammable products. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

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.- Specific storage requirements

Minimum Temp.: 5 °C
Maximum Temp.: 30 °C
Maximum time: 12 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 assessed in the workplace:

There are no applicable occupational exposure limits for the substances contained in the product

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate CAS: 5888-33-5 EC: 227-561-6	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	1.39 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	4.9 mg/m ³	Not relevant
(1-methyl-1,2-ethanediy)bis[oxy(methyl-2,1-ethanediy)] diacrylate CAS: 42978-66-5 EC: 256-032-2	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	1.7 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	2.35 mg/m ³	Not relevant

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2-hydroxy-2-methylpropiophenone CAS: 7473-98-5 EC: 231-272-0	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	1 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	3.5 mg/m ³	Not relevant
Methacrylic acid CAS: 79-41-4 EC: 201-204-4	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	4.25 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	29.6 mg/m ³	88 mg/m ³
Camphene CAS: 79-92-5 EC: 201-234-8	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	1.25 mg/kg	Not relevant	0.21 mg/kg	Not relevant
	Inhalation	110.19 mg/m ³	Not relevant	110.19 mg/m ³	Not relevant
2-hydroxyethyl acrylate CAS: 818-61-1 EC: 212-454-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	Not relevant	2.4 mg/m ³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate CAS: 5888-33-5 EC: 227-561-6	Oral	Not relevant	Not relevant	0.83 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	0.83 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	1.45 mg/m ³	Not relevant
2-hydroxy-2-methylpropiophenone CAS: 7473-98-5 EC: 231-272-0	Oral	Not relevant	Not relevant	0.4 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	0.5 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	0.9 mg/m ³	Not relevant
Methacrylic acid CAS: 79-41-4 EC: 201-204-4	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	2.55 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	6.3 mg/m ³	6.55 mg/m ³
Camphene CAS: 79-92-5 EC: 201-234-8	Oral	0.625 mg/kg	Not relevant	0.1 mg/kg	Not relevant
	Dermal	0.625 mg/kg	Not relevant	0.1 mg/kg	Not relevant
	Inhalation	54.3 mg/m ³	Not relevant	54.3 mg/m ³	Not relevant
2-hydroxyethyl acrylate CAS: 818-61-1 EC: 212-454-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	Not relevant	1.2 mg/m ³

PNEC:

Identification					
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate CAS: 5888-33-5 EC: 227-561-6	STP	2 mg/L	Fresh water		0.001 mg/L
	Soil	0.029 mg/kg	Marine water		0 mg/L
	Intermittent	0.007 mg/L	Sediment (Fresh water)		0.145 mg/kg
	Oral	Not relevant	Sediment (Marine water)		0.015 mg/kg
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate CAS: 42978-66-5 EC: 256-032-2	STP	10 mg/L	Fresh water		0.005 mg/L
	Soil	0.095 mg/kg	Marine water		0 mg/L
	Intermittent	0.046 mg/L	Sediment (Fresh water)		0.487 mg/kg
	Oral	Not relevant	Sediment (Marine water)		0.049 mg/kg
2-hydroxy-2-methylpropiophenone CAS: 7473-98-5 EC: 231-272-0	STP	45 mg/L	Fresh water		0.002 mg/L
	Soil	0.001 mg/kg	Marine water		0 mg/L
	Intermittent	0.019 mg/L	Sediment (Fresh water)		0.009 mg/kg
	Oral	Not relevant	Sediment (Marine water)		0.001 mg/kg
Camphene CAS: 79-92-5 EC: 201-234-8	STP	10 mg/L	Fresh water		0.001 mg/L
	Soil	0.021 mg/kg	Marine water		0 mg/L
	Intermittent	0.001 mg/L	Sediment (Fresh water)		0.026 mg/kg
	Oral	0.00208 g/kg	Sediment (Marine water)		0.003 mg/kg

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)


Identification				
2-hydroxyethyl acrylate CAS: 818-61-1 EC: 212-454-9	STP	10 mg/L	Fresh water	0.017 mg/L
	Soil	0.003 mg/kg	Marine water	0.002 mg/L
	Intermittent	0.036 mg/L	Sediment (Fresh water)	0.064 mg/kg
	Oral	Not relevant	Sediment (Marine water)	0.006 mg/kg

8.2 Exposure controls:


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

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<UKCA marking>> or <<CE marking>>. 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	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours	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	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Butyl, Breakthrough time: > 480 min, Thickness: 0.3 mm)	Replace the gloves at any sign of deterioration.

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.- Eye and face protection

Pictogram	PPE	Remarks
 Mandatory face protection	Face shield	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk	Replace boots at any sign of deterioration.

F.- 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:

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

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

The Volatile Organic Compounds in Paints, Varnishes and Vehicle Refinishing Products Regulations 2012:

V.O.C. (Supply):	0.26 % weight
V.O.C. density at 20 °C:	2.68 kg/m ³ (2.68 g/L)

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:	Liquid
Appearance:	Fluid
Colour:	Colourless
Odour:	Mild
Odour threshold:	Not relevant *

Volatility:

Boiling point at atmospheric pressure:	270 °C
Vapour pressure at 20 °C:	79 Pa
Vapour pressure at 50 °C:	422.03 Pa (0.42 kPa)
Evaporation rate at 20 °C:	Not relevant *

Product description:

Density at 20 °C:	1049.3 kg/m ³
Relative density at 20 °C:	1.049
Dynamic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 40 °C:	Not relevant *
Concentration:	Not relevant *
pH:	ca. 6
Vapour density at 20 °C:	Not relevant *
Partition coefficient n-octanol/water 20 °C:	Not relevant *
Solubility in water at 20 °C:	Not relevant *
Solubility properties:	Not relevant *
Decomposition temperature:	Not relevant *
Melting point/freezing point:	Not relevant *

Flammability:

Flash Point:	Non Flammable (>60 °C)
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	214 °C
Lower flammability limit:	Not relevant *
Upper flammability limit:	Not relevant *

Particle characteristics:

Median equivalent diameter:	Non-applicable
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9.2 Other information:

Information with regard to physical hazard classes:

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

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Explosive properties:	Not relevant *
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	Not relevant *
Aerosols-total percentage (by mass) of flammable components:	Not relevant *

Other safety characteristics:

Surface tension at 20 °C:	Not relevant *
Refraction index:	Not relevant *

*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 from Safety Data Sheet.

10.2 Chemical stability:

Chemically stable under the indicated 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:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Precaution	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:

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 hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

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

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- 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 hazardous for the effects mentioned. For more information see section 3.
 - IARC: Not relevant
 - Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
 - Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous 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 hazardous with sensitising effects. For more information see section 3.
 - Skin: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.
- F- Specific target organ toxicity (STOT) - single exposure:

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.
- 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, as it does not contain substances classified as hazardous for this effect. 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 hazardous for this effect. For more information see section 3.
- H- Aspiration hazard:

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

Other information:

Not relevant

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Methacrylic acid CAS: 79-41-4	LD50 oral	1320 mg/kg	Rat
	LD50 dermal	500 mg/kg (ATEi)	Rabbit
	LC50 inhalation		
2-hydroxy-2-methylpropiophenone CAS: 7473-98-5	LD50 oral	1694 mg/kg (ATEi)	Rat
	LD50 dermal		
	LC50 inhalation		
(1-methyl-1,2-ethanediyil)bis[oxy(methyl-2,1-ethanediyil)] diacrylate CAS: 42978-66-5	LD50 oral	6800 mg/kg	Rat
	LD50 dermal		
	LC50 inhalation		
Camphene CAS: 79-92-5	LD50 oral	>5000 mg/kg	Rat
	LD50 dermal	8189 mg/kg	Rabbit
	LC50 inhalation		
2-hydroxyethyl acrylate CAS: 818-61-1	LD50 oral		
	LD50 dermal	300 mg/kg	Rabbit
	LC50 inhalation		

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available
Very toxic to aquatic life with long lasting effects.

12.1 Toxicity:

Acute toxicity:

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration	Species	Genus
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate CAS: 5888-33-5	LC50	>0.1 - 1 mg/L (96 h)	Fish
	EC50	>0.1 - 1 mg/L (48 h)	Crustacean
	EC50	>0.1 - 1 mg/L (72 h)	Algae
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate CAS: 42978-66-5	LC50	5.5 mg/L (96 h)	Leuciscus idus
	EC50	88.7 mg/L (48 h)	Daphnia magna
	EC50	28 mg/L (72 h)	Scenedesmus subspicatus
2-hydroxy-2-methylpropiophenone CAS: 7473-98-5	LC50	>10 - 100 mg/L (96 h)	Fish
	EC50	>10 - 100 mg/L (48 h)	Crustacean
	EC50	>10 - 100 mg/L (72 h)	Algae
Methacrylic acid CAS: 79-41-4	LC50	Not relevant	
	EC50	130 mg/L (48 h)	Daphnia magna
	EC50	Not relevant	
Camphene CAS: 79-92-5	LC50	0.72 mg/L (96 h)	Brachydanio rerio
	EC50	46 mg/L (24 h)	Daphnia magna
	EC50	Not relevant	
2-hydroxyethyl acrylate CAS: 818-61-1	LC50	>0.1 - 1 mg/L (96 h)	Fish
	EC50	>0.1 - 1 mg/L (48 h)	Crustacean
	EC50	>0.1 - 1 mg/L (72 h)	Algae

Chronic toxicity:

Identification	Concentration	Species	Genus
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate CAS: 5888-33-5	NOEC	Not relevant	
	NOEC	0.092 mg/L	Daphnia magna
Methacrylic acid CAS: 79-41-4	NOEC	Not relevant	
	NOEC	53 mg/L	Daphnia magna
2-hydroxyethyl acrylate CAS: 818-61-1	NOEC	Not relevant	
	NOEC	1.8 mg/L	Daphnia magna

12.2 Persistence and degradability:

Substance-specific information:

Identification	Degradability	Biodegradability
Methacrylic acid CAS: 79-41-4	BOD5	Concentration
	COD	Period
	BOD5/COD	% Biodegradable
Camphene CAS: 79-92-5	BOD5	Concentration
	COD	Period
	BOD5/COD	% Biodegradable
2-hydroxyethyl acrylate CAS: 818-61-1	BOD5	Concentration
	COD	Period
	BOD5/COD	% Biodegradable

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate CAS: 42978-66-5	BCF
	Pow Log
	Potential
Methacrylic acid CAS: 79-41-4	BCF
	Pow Log
	Potential
Camphene CAS: 79-92-5	BCF
	Pow Log
	Potential

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioaccumulation potential	
2-hydroxyethyl acrylate CAS: 818-61-1	BCF	0.41
	Pow Log	-0.21
	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Methacrylic acid CAS: 79-41-4	Koc	25	Henry	3.9E-2 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	2.912E-2 N/m (25 °C)	Moist soil	Yes
Camphene CAS: 79-92-5	Koc	Not relevant	Henry	Not relevant
	Conclusion	Not relevant	Dry soil	Not relevant
	Surface tension	1.098E-2 N/m (205.93 °C)	Moist soil	Not relevant
2-hydroxyethyl acrylate CAS: 818-61-1	Koc	Not relevant	Henry	Not relevant
	Conclusion	Not relevant	Dry soil	Not relevant
	Surface tension	2.487E-2 N/m (25 °C)	Moist soil	Not relevant

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class
08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances	Hazardous

Type of waste:

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 The Waste (England & Wales) Regulations 2011, 2011 No. 988. As under 15 01 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-hazardous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of UK REACH the provisions related to waste management are stated:

UK legislation: The Waste (England & Wales) Regulations 2011.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2023 and RID 2023:

SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number:** UN3082
- 14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)
- 14.3 Transport hazard class(es):** 9
- Labels:** 9
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** Yes
- 14.6 Special precautions for user**
- 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:** Not relevant

Transport of dangerous goods by sea:

With regard to IMDG 41-22:



- 14.1 UN number:** UN3082
- 14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)
- 14.3 Transport hazard class(es):** 9
- Labels:** 9
- 14.4 Packing group:** III
- 14.5 Marine pollutant:** Yes
- 14.6 Special precautions for user**
- Special regulations: 335, 969, 274
- EmS Codes: F-A, S-F
- Physico-Chemical properties: see section 9
- Limited quantities: 5 L
- Segregation group: Not relevant
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Not relevant

Transport of dangerous goods by air:

With regard to IATA/ICAO 2024:



- 14.1 UN number:** UN3082
- 14.2 UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate)
- 14.3 Transport hazard class(es):** 9
- Labels:** 9
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** Yes
- 14.6 Special precautions for user**
- Physico-Chemical properties: see section 9
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Not relevant

SECTION 15: REGULATORY INFORMATION

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

- Substances listed in UK candidate list of substances of very high concern (SVHCs): Not relevant
- Substances listed in UK REACH Authorisation List (Annex 14): Not relevant

The Control of Major Accident Hazards Regulations 2015:

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SECTION 15: REGULATORY INFORMATION (continued)

Section	Description	Lower-tier requirements	Upper-tier requirements
E1	ENVIRONMENTAL HAZARDS	100	200

Restrictions to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII UK 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.

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 REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020.

Control of Substances Hazardous to Health Regulations 2002 (as amended)

EH40/2005 Workplace exposure limits.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.

Texts of the legislative phrases mentioned in section 2:

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

H317: May cause an allergic skin reaction.

H315: Causes skin irritation.

H335: May cause respiratory irritation.

H312: Harmful in contact with skin.

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

GB CLP Regulation (UK S.I. 2019/720 and UK S.I. 2020/1567):

Acute Tox. 3: H311 - Toxic in contact with skin.

Acute Tox. 4: H302 - Harmful if swallowed.

Acute Tox. 4: H302+H332 - Harmful if swallowed 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.

Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.

Eye Dam. 1: H318 - Causes serious eye damage.

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

Flam. Sol. 2: H228 - Flammable solid.

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

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. 1A: H317 - May cause an allergic skin reaction.

STOT SE 3: H335 - May cause respiratory irritation.

Classification procedure:

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SECTION 16: OTHER INFORMATION (continued)

Aquatic Acute 1: Calculation method
Aquatic Chronic 1: Calculation method
Skin Sens. 1A: Calculation method
Skin Irrit. 2: Calculation method
STOT SE 3: Calculation method
Acute Tox. 4: Calculation method
Eye Irrit. 2: Calculation method

Advice related to training:

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: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at UK, 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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