

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 10/7/2021 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
Product name : Vertex Self Curing - Holland Dental Self-Curing - Vertex Castapress - Holland Dental Castapress - Vertex Castavaria
Product group : Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Main use category : Professional use
Use of the substance/mixture : Manufacturing of dental applications.
Use of the substance/mixture : Dentistry

Title	Life cycle stage	Use descriptors
Vertex Self Curing - Holland Dental Self-Curing - Vertex Castapress - Holland Dental Castapress - Vertex Castavaria	Professional	SU20

Full text of use descriptors: see section 16

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Vertex-Dental
Centurionbaan 190
3769 AV Soesterberg
The Netherlands
T +31 886160400
info@vertex-dental.com - www.vertex-dental.com

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Flammable liquids, Category 2 H225
Skin corrosion/irritation, Category 2 H315
Skin sensitisation, Category 1 H317
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation H335

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction.

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS02

GHS07

Signal word (CLP)

: Danger

Contains

: methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate, 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, 2-hydroxyethyl methacrylate, 2-(2H-benzotriazol-2-yl)-p-cresol

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapour.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H335 - May cause respiratory irritation.

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 - Wear protective gloves.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P370+P378 - In case of fire: Use foam, dry extinguishing powder, carbon dioxide (CO₂) to extinguish.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

Extra phrases

: For professional users only.
Medical devices as defined in Regulation (EU) 2017/745 of the European Parliament and of the Council on medical devices.

2.3. Other hazards

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% w/w (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit (Note D)	CAS-No.: 80-62-6 EC-No.: 201-297-1 EC Index-No.: 607-035-00-6 REACH-no: 01-2119452498-28	≥ 75	Flam. Liq. 2, H225 STOT SE 3, H335 Skin Irrit. 2, H315 Skin Sens. 1, H317
2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester (Note D)	CAS-No.: 97-90-5 EC-No.: 202-617-2 EC Index-No.: 607-114-00-5 REACH-no: 01-2119965172-38	5 – 10	Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 3, H412

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Name	Product identifier	% w/w (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
N,N-dimethyl-p-toluidine (Note C)	CAS-No.: 99-97-8 EC-No.: 202-805-4 EC Index-No.: 612-056-00-9 REACH-no: 01-2119937766-23	0.1 – 1	Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Oral), H301 STOT RE 2, H373 Aquatic Chronic 3, H412
2-(2H-benzotriazol-2-yl)-p-cresol	CAS-No.: 2440-22-4 EC-No.: 219-470-5 REACH-no: 01-2119583811-34	0.1 – 1	Skin Sens. 1B, H317 Aquatic Chronic 1, H410
2-hydroxyethyl methacrylate (Note D)	CAS-No.: 868-77-9 EC-No.: 212-782-2 EC Index-No.: 607-124-00-X REACH-no: 01-2119490169-29	0.1 – 1	Eye Irrit. 2, H319 Skin Sens. 1, H317

Specific concentration limits:		
Name	Product identifier	Specific concentration limits
2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester	CAS-No.: 97-90-5 EC-No.: 202-617-2 EC Index-No.: 607-114-00-5 REACH-no: 01-2119965172-38	(10 ≤C ≤ 100) STOT SE 3, H335

Note C : Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Note D : Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Part 3.

However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the supplier must state on the label the name of the substance followed by the words "non-stabilised".

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: May cause respiratory irritation. May cause an allergic skin reaction.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction. Causes skin irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide. Sand.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour.
Explosion hazard : May form flammable/explosive vapour-air mixture.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Collect spillage. Store away from other materials. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

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Precautions for safe handling	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking.
Hygiene measures	: Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Ground/bond container and receiving equipment. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical/ventilating/lighting equipment.
Storage conditions	: Keep only in the original container in a cool well ventilated place. Keep container tightly closed. Store locked up. Keep in fireproof place.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight. Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (80-62-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Methyl methacrylate
IOEL TWA [ppm]	50 ppm
IOEL STEL [ppm]	100 ppm
Regulatory reference	COMMISSION DIRECTIVE 2009/161/EU
United Kingdom - Occupational Exposure Limits	
Local name	Methyl methacrylate
WEL TWA (OEL TWA) [1]	208 mg/m ³
WEL TWA (OEL TWA) [2]	50 ppm
WEL STEL (OEL STEL)	416 mg/m ³
WEL STEL (OEL STEL) [ppm]	100 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

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8.1.4. DNEL and PNEC

methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (80-62-6)	
DNEL/DMEL (Workers)	
Acute - local effects, dermal	1.5 mg/cm ²
Acute - local effects, inhalation	416 mg/m ³
Long-term - systemic effects, dermal	13.67 mg/kg bodyweight/day
Long-term - local effects, dermal	1.5 mg/cm ²
Long-term - systemic effects, inhalation	208 mg/m ³
Long-term - local effects, inhalation	208 mg/m ³
DNEL/DMEL (General population)	
Acute - local effects, dermal	1.5 mg/cm ²
Acute - local effects, inhalation	208 mg/m ³
Long-term - systemic effects, oral	8.2 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	74.3 mg/m ³
Long-term - systemic effects, dermal	8.2 mg/kg bodyweight/day
Long-term - local effects, dermal	1.5 mg/cm ²
Long-term - local effects, inhalation	104 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	0.94 mg/l
PNEC aqua (marine water)	0.94 mg/l
PNEC aqua (intermittent, freshwater)	0.94 mg/l
PNEC aqua (intermittent, marine water)	0.94 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	5.74 mg/kg dwt
PNEC sediment (marine water)	0.102 mg/kg dwt
PNEC (Soil)	
PNEC soil	1.47 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	10 mg/l
2-(2H-benzotriazol-2-yl)-p-cresol (2440-22-4)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	1 mg/m ³
Acute - local effects, inhalation	1 mg/m ³
Long-term - systemic effects, dermal	2.5 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	1.2 mg/kg bodyweight/day
Long-term - systemic effects, dermal	1.2 mg/kg bodyweight/day

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2-(2H-benzotriazol-2-yl)-p-cresol (2440-22-4)	
PNEC (Water)	
PNEC aqua (freshwater)	0.00026 mg/l
PNEC aqua (marine water)	0.0000002 mg/l
PNEC aqua (intermittent, freshwater)	1 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.136 mg/kg dwt
PNEC sediment (marine water)	0.0136 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.0269 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	1 mg/l
2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester (97-90-5)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	1.3 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2.45 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	0.83
Long-term - systemic effects, inhalation	1.45 mg/m ³
Long-term - systemic effects, dermal	0.83 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.139 mg/l
PNEC aqua (marine water)	0.0139 mg/l
PNEC aqua (intermittent, freshwater)	0.15 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	1.6 mg/kg dwt
PNEC sediment (marine water)	0.16 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.239 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	57 mg/l
2-hydroxyethyl methacrylate (868-77-9)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	1.3 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	4.9 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	0.83 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2.9 mg/m ³

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2-hydroxyethyl methacrylate (868-77-9)	
Long-term - systemic effects, dermal	0.83 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.48 mg/l
PNEC aqua (marine water)	0.48 mg/l
PNEC aqua (intermittent, freshwater)	1 mg/l
PNEC aqua (intermittent, marine water)	1 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	3.79 mg/kg dwt
PNEC sediment (marine water)	3.79 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.47 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	10 mg/l
N,N-dimethyl-p-toluidine (99-97-8)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	0.694167 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.224 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	0.173542 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	0.301812 mg/m ³
Long-term - systemic effects, dermal	0.292522 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.0137 – 0.15259 mg/l
PNEC aqua (marine water)	0.00137 – 0.015259 mg/l
PNEC aqua (intermittent, freshwater)	0.0137 – 0.15259 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	45.378 – 48.245 mg/kg dwt
PNEC sediment (marine water)	45.378 – 48.245 mg/kg dwt
PNEC (Soil)	
PNEC soil	18.677 – 20.365 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	1.36 – 4.286 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

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8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. Protective clothing. Safety glasses. Avoid all unnecessary exposure.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Wear eye glasses with side protection according to EN 166.

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing. Standard. EN 13034

Hand protection:

Wear suitable gloves tested to EN374. Recommendation: Wear suitable gloves resistant to chemical penetration. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. Gloves must be replaced after each use and whenever signs of wear or perforation appear. Suitable material: butyl rubber. Layer thickness : 0.3 mm. penetration time (maximum wearing period): 60 min. If there is a risk of liquid being splashed : Nitrile rubber gloves Incidental. Thickness of glove material: 0.11 mm

8.2.2.3. Respiratory protection

Respiratory protection:

No respiratory protection needed under normal use conditions. When exposure limit values are exceeded: use respirators with filtertype A (organic gases and vapours). Use half masks (approved to EN 405) or full face masks (approved to EN 136).

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: pale. Colourless.
Odour	: Ester. strong. acid. characteristic.
Odour threshold	: Not available
Melting point	: -48 °C
Freezing point	: Not available
Boiling point	: 100.5 °C
Flammability	: Highly flammable liquid and vapour, Highly flammable liquid and vapour
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: 10 °C
Auto-ignition temperature	: 421 °C
Decomposition temperature	: No data available
pH	: Not applicable
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

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Solubility	: miscible with most organic solvents. Water: 1.6 % slightly soluble Organic solvent: Soluble in organic solvents
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: Not applicable
Vapour pressure	: 3.6 Pa @ 20°C
Vapour pressure at 50 °C	: Not available
Density	: Not applicable
Relative density	: 0.94 @ 15.5°C
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC content : 94 – 97 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions. Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (80-62-6)	
LD50 oral rat	7900 – 9400 mg/kg
LD50 dermal rabbit	5000 mg/kg
LC50 Inhalation - Rat	29.8 mg/l/4h
2-(2H-benzotriazol-2-yl)-p-cresol (2440-22-4)	
LD50 oral rat	10000 mg/kg
LD50 dermal rat	2000 mg/kg
LC50 Inhalation - Rat	590 mg/m³
2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester (97-90-5)	
LD50 oral rat	8300 ml/kg
LD50 dermal rat	2000 mg/kg
2-hydroxyethyl methacrylate (868-77-9)	
LD50 oral rat	5564 mg/kg
LD50 dermal rabbit	5000 mg/kg
N,N-dimethyl-p-toluidine (99-97-8)	
LD50 oral rat	1650 mg/kg
LD50 oral	139 mg/kg bodyweight Animal: mouse, Guideline: other:
LD50 dermal rabbit	2000 mg/kg
LC50 Inhalation - Rat	1.4 mg/l/4h
Skin corrosion/irritation	: Causes skin irritation. pH: Not applicable
Serious eye damage/irritation	: Not classified pH: Not applicable
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: May cause respiratory irritation.
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (80-62-6)	
STOT-single exposure	May cause respiratory irritation.
2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester (97-90-5)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (80-62-6)	
LOAEC (inhalation, rat, vapour, 90 days)	416 mg/m³ air
NOAEL (oral, rat, 90 days)	124.1 – 164 mg/kg bodyweight/day
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	500 – 1000 ppm

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2-(2H-benzotriazol-2-yl)-p-cresol (2440-22-4)	
NOAEL (oral, rat, 90 days)	47 – 58 mg/kg bodyweight/day
2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester (97-90-5)	
LOAEC (inhalation, rat, gas, 90 days)	350 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
NOAEL (oral, rat, 90 days)	100 – 1500 mg/kg bodyweight/day
2-hydroxyethyl methacrylate (868-77-9)	
LOAEC (inhalation, rat, gas, 90 days)	350 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Remarks on results: other:
NOAEL (oral, rat, 90 days)	100 – 1500 mg/kg bodyweight/day
NOAEC (inhalation, rat, gas, 90 days)	100 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study), Remarks on results: other:
N,N-dimethyl-p-toluidine (99-97-8)	
LOAEL (oral, rat, 90 days)	201.786 mg/kg bodyweight/day
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Vertex Self Curing - Holland Dental Self-Curing - Vertex Castapress - Holland Dental Castapress - Vertex Castavaria	
Viscosity, kinematic	No data available

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (80-62-6)	
LC50 - Fish [1]	79 mg/l
EC50 - Crustacea [1]	69 mg/l
EC50 72h - Algae [1]	110 mg/l
LOEC (chronic)	68 mg/l (21 d)
NOEC (acute)	40 mg/l (4 d)
NOEC (chronic)	37 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	37 mg/l (21 d)

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2-(2H-benzotriazol-2-yl)-p-cresol (2440-22-4)	
LC50 - Fish [1]	0.17 mg/l
EC50 72h - Algae [1]	100 mg/l
LOEC (chronic)	0.041 mg/l (21 d)
NOEC (acute)	0.17 mg/l (4 d)
NOEC (chronic)	0.013 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic crustacea	0.013 mg/l
2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester (97-90-5)	
LC50 - Fish [1]	15.95 mg/l
EC50 - Crustacea [1]	44.9 mg/l
EC50 72h - Algae [1]	17.3 mg/l
EC50 96h - Algae [1]	19 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [2]	10.1 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	5.05 mg/l
NOEC chronic fish	5.05 mg/l (21 d)
2-hydroxyethyl methacrylate (868-77-9)	
LC50 - Fish [1]	100 mg/l
EC50 - Crustacea [1]	380 mg/l
EC50 - Other aquatic organisms [1]	380 mg/l 48h
EC50 72h - Algae [1]	345 – 836 mg/l
EC50 72h - Algae [2]	345 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	710 mg/l
LOEC (chronic)	49.6 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	24.1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic crustacea	24.1 mg/l (21 d)
N,N-dimethyl-p-toluidine (99-97-8)	
LC50 - Fish [1]	45 – 52.8 mg/l
EC50 - Crustacea [1]	13.7 mg/l
EC50 - Other aquatic organisms [1]	42.864 mg/l microorganisms
EC50 72h - Algae [1]	22 – 24.37 mg/l
12.2. Persistence and degradability	
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Persistence and degradability	Not established.

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12.3. Bioaccumulative potential

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Partition coefficient n-octanol/water (Log Pow)	Not applicable
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Bioaccumulative potential	Not established.
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methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate (80-62-6)

Partition coefficient n-octanol/water (Log Pow)	1.38 @ 20 °C and pH 7
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2-(2H-benzotriazol-2-yl)-p-cresol (2440-22-4)

Partition coefficient n-octanol/water (Log Pow)	4.2 @ 25 °C and pH 6.3
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2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester (97-90-5)

Bioconcentration factor (BCF REACH)	21.9
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Partition coefficient n-octanol/water (Log Pow)	2.4
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2-hydroxyethyl methacrylate (868-77-9)

Partition coefficient n-octanol/water (Log Pow)	0.42 @ 25 °C and pH 5.9 - 6.1
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N,N-dimethyl-p-toluidine (99-97-8)

Partition coefficient n-octanol/water (Log Pow)	1.729 @ 35 °C and pH 5.6
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Additional information	: Flammable vapours may accumulate in the container. Handle empty containers with care because residual vapours are flammable.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information






In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1247	UN 1247	UN 1247	UN 1247	UN 1247

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ADR	IMDG	IATA	ADN	RID
14.2. UN proper shipping name				
METHYL METHACRYLATE MONOMER, STABILIZED	METHYL METHACRYLATE MONOMER, STABILIZED	Methyl methacrylate monomer, stabilized	METHYL METHACRYLATE MONOMER, STABILIZED	METHYL METHACRYLATE MONOMER, STABILIZED
Transport document description				
UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED, 3, II, (D/E)	UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED, 3, II	UN 1247 Methyl methacrylate monomer, stabilized, 3, II	UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED, 3, II	UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED, 3, II
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : F1
 Special provisions (ADR) : 386
 Limited quantities (ADR) : 1I
 Excepted quantities (ADR) : E2
 Packing instructions (ADR) : P001, IBC02, R001
 Mixed packing provisions (ADR) : MP19
 Portable tank and bulk container instructions (ADR) : T4
 Portable tank and bulk container special provisions (ADR) : TP1
 Tank code (ADR) : LGBF
 Vehicle for tank carriage : FL
 Transport category (ADR) : 2
 Special provisions for carriage - Packages (ADR) : V8
 Special provisions for carriage - Operation (ADR) : S2, S4, S20
 Hazard identification number (Kemler No.) : 339
 Orange plates :



Tunnel restriction code (ADR) : D/E
 EAC code : 3YE

Transport by sea

Special provisions (IMDG) : 386
 Limited quantities (IMDG) : 1 L
 Excepted quantities (IMDG) : E2

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Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-D
Stowage category (IMDG)	: C
Stowage and handling (IMDG)	: SW1, SW2
Flash point (IMDG)	: 8°C c.c.
Properties and observations (IMDG)	: Colourless, volatile liquid. Flashpoint: 8°C c.c. Explosive limits: 1.5% to 11.6% Immiscible with water. Irritating to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 353
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A209
ERG code (IATA)	: 3L

Inland waterway transport

Classification code (ADN)	: F1
Special provisions (ADN)	: 386
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 1

Rail transport

Classification code (RID)	: F1
Special provisions (RID)	: 386
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: LGBF
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE7
Hazard identification number (RID)	: 339

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
3(a)	Vertex Self Curing - Holland Dental Self-Curing - Vertex Castapress - Holland Dental Castapress - Vertex Castavaria ; methyl methacrylate; methyl 2-methylprop-2- enoate; methyl 2- methylpropenoate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	Vertex Self Curing - Holland Dental Self-Curing - Vertex Castapress - Holland Dental Castapress - Vertex Castavaria ; N,N- dimethyl-p-toluidine ; methyl methacrylate; methyl 2-methylprop-2- enoate; methyl 2- methylpropenoate ; 2- Propenoic acid, 2-methyl-, 1,2-ethanediyl ester ; 2- hydroxyethyl methacrylate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	N,N-dimethyl-p-toluidine ; 2-Propenoic acid, 2- methyl-, 1,2-ethanediyl ester	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	methyl methacrylate; methyl 2-methylprop-2- enoate; methyl 2- methylpropenoate	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

VOC content : 94 – 97 %

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

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Data sources	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Other information	: DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation

Full text of use descriptors

SU20	Health services
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Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Flam. Liq. 2	H225	On basis of test data
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Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Skin Irrit. 2	H315	Calculation method
Skin Sens. 1	H317	Calculation method
STOT SE 3	H335	Calculation method

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.