

Safety Data Sheet

according to Regulation (EC) No 1907/2006

picopreci plus

Revision date: 11.09.2023

Product code: 13522XX

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

picopreci plus

Further trade names

picopreci plus rosa

picopreci plus zahnfarben

picopreci plus rosa-opak

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

light curing dental resin

1.3. Details of the supplier of the safety data sheet**Manufacturer**

Company name: DeltaMed GmbH
Street: Raiffeisenstraße 8a
Place: 61169 Friedberg
Telephone: +49 6031 7283-0
E-mail: info@deltamed.de
Internet: www.deltamed.de
Responsible Department: F&E
Telefax +49 6031 7283-29

Telefax: +49 6031 7283-29

Supplier

Company name: picodent GmbH
Street: Lüdenscheider Str. 24-26
Place: 51688 Wipperfürth
Telephone: +49 2267 6580-0
Internet: picodent@picodent.de
Responsible Department: Mo.-Fr. 7.30 - 16.45 Uhr

1.4. Emergency telephone number:

Giftinformationszentrum Universitätsklinikum Mainz
Telefon +49 6131 19240

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

Skin Sens. 1; H317

Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008****Hazard components for labelling**

urethane dimethacrylate (UDMA)

acrylic resin

1,4 Butanediol dimethacrylate (1,4-BDDMA)

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)

Signal word: Warning

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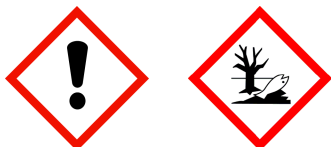
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Pictograms:



Hazard statements

- H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

- P261 Avoid breathing dust/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection.
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with local regulation.

Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture of acrylic resins, fillers and initiators.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
72869-86-4	urethane dimethacrylate (UDMA)			50 - 70 %
	Skin Sens. 1B, Aquatic Chronic 2; H317 H411			
	acrylic resin			20 - 40 %
	Skin Sens. 1B, Aquatic Chronic 2; H317 H411			
2082-81-7	1,4 Butanediol dimethacrylate (1,4-BDDMA)			< 20 %
	Skin Sens. 1B; H317			
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)			< 1 %
	278-355-8	015-203-00-X		
	Repr. 2, Skin Sens. 1B, Aquatic Chronic 2; H361f H317 H411			

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

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
72869-86-4		urethane dimethacrylate (UDMA)	50 - 70 %
		inhalation: LC50 = >5 mg/l (dusts or mists); dermal: LD50 = >2000 mg/kg; oral: LD50 = >5000 mg/kg	
		acrylic resin	20 - 40 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg	
2082-81-7		1,4 Butanediol dimethacrylate (1,4-BDDMA)	< 20 %
		dermal: LD50 = > 3000 mg/kg; oral: LD50 = > 5000 mg/kg	
75980-60-8	278-355-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)	< 1 %
		dermal: LD50 = >2000 mg/kg; oral: LD50 = > 5000 mg/kg	

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its vapours. Take off all contaminated clothing immediately.

After inhalation

Get medical advice/attention if you feel unwell. Provide fresh air.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Immediately remove any contaminated clothing, shoes or stockings. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water. If eye irritation persists: Get medical advice/attention.

After ingestion

Do NOT induce vomiting. Medical treatment necessary.

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

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam, Extinguishing powder, Carbon dioxide.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon monoxide, Carbon dioxide, Hazardous decomposition products.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.

Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

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6.1. Personal precautions, protective equipment and emergency procedures

General advice

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Larger quantities: Take up mechanically (by pumping). Smaller quantities and/or residues: Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Do not breathe gas/fumes/vapour/spray.
Provide fresh air.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

Advice on general occupational hygiene

Avoid contact with skin, eyes and clothes. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Protect from the action of light. Keep only in the original container at a temperature between 4 -25 °C. Can polymerize with intense heat release.

Hints on joint storage

No special measures are necessary.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Name of agent			
DNEL type		Exposure route	Effect	Value
72869-86-4	urethane dimethacrylate (UDMA)			
Worker DNEL, long-term		dermal	systemic	1,3 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	3,3 mg/m³
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)			
Worker DNEL, long-term		dermal	systemic	0,233 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,145 mg/m³
Consumer DNEL, long-term		oral	systemic	0,0833 mg/kg bw/day

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PNEC values

CAS No	Name of agent	
Environmental compartment		Value
72869-86-4	urethane dimethacrylate (UDMA)	
Freshwater		0,01 mg/l
Marine water		0,001 mg/l
Freshwater sediment		4,56 mg/kg
Marine sediment		0,46 mg/kg
Micro-organisms in sewage treatment plants (STP)		3,61 mg/l
Soil		0,91 mg/kg
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)	
Marine water		0,00014 mg/l
Freshwater sediment		0,115 mg/kg
Marine sediment		0,0115 mg/kg
Soil		0,0222 mg/kg

8.2. Exposure controls

Individual protection measures, such as personal protective equipment

Eye/face protection

Eye glasses with side protection

Hand protection

butyl rubber gloves (0.7 mm), Break through time ca. 300 min (EN 374). Gloves should be replaced regularly, especially after extended contact with the product. For each work-place a suitable glove type has to be selected.

Skin protection

Wear suitable protective clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Gel
Colour:	various, depending on coloration
Odour:	aromatic
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined
Flammability:	flammable liquids
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 100 °C °C
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	not determined
Viscosity / kinematic:	not determined
Water solubility:	not determined
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not determined
Density:	1,1 g/cm ³

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Relative vapour density:

not determined

Particle characteristics:

not applicable

9.2. Other information**Information with regard to physical hazard classes**

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Other safety characteristics

Evaporation rate:

not determined

Solid content:

not determined

Further Information

Product has not been tested. The statement is derived from the properties of the components.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

10.4. Conditions to avoid

Protect from the action of light. Keep only in the original container at a temperature between 4 -25 °C. Can polymerize with intense heat release.

10.5. Incompatible materials

Oxidising agent, Reducing agent, Heavy metals, Acids, Alkali (lye)

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
72869-86-4	urethane dimethacrylate (UDMA)				
	oral	LD50 >5000 mg/kg	Rat	OECD 401	
	dermal	LD50 >2000 mg/kg	Rat	OECD 402	
	inhalation (4 h) dust/mist	LC50 >5 mg/l			
	acrylic resin				
	oral	LD50 > 2000 mg/kg	Rat	OECD 423	
	dermal	LD50 > 2000 mg/kg	Rat	OECD 402	
2082-81-7	1,4 Butanediol dimethacrylate (1,4-BDDMA)				
	oral	LD50 > 5000 mg/kg	Rat	OECD 401	
	dermal	LD50 > 3000 mg/kg	Rabbit		
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)				
	oral	LD50 > 5000 mg/kg	Rat	ECHA	OECD 401
	dermal	LD50 >2000 mg/kg	Rat	ECHA	

Irritation and corrosivity

Based on available data, the classification criteria are not met.
May cause mild skin and eye irritation.

Sensitising effects

May cause an allergic skin reaction. (urethane dimethacrylate (UDMA); acrylic resin; 1,4 Butanediol dimethacrylate (1,4-BDDMA); Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO))
May cause sensitization by skin contact.

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

11.2. Information on other hazards

Further information

The product has not been tested. The statement is derived from the properties of the single components.

SECTION 12: Ecological information

12.1. Toxicity

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
72869-86-4	urethane dimethacrylate (UDMA)					
	Acute fish toxicity	LC50 10,1 mg/l	96 h	Danio rerio (zebrafish)	OECD 203	
	Acute algae toxicity	ErC50 >0,68 mg/l	72 h	Desmodesmus subspicatus	OECD 201	
	Acute crustacea toxicity	EC50 >1,2 mg/l	48 h	Daphnia magna (Big water flea)		
	acrylic resin					
	Acute fish toxicity	LC50 1,65 mg/l	96 h	Danio rerio (zebrafish)	OECD 203	
	Acute algae toxicity	ErC50 1,6 mg/l	72 h	Pseudokirchneriella subcapitata	OECD 201	
	Acute crustacea toxicity	EC50 2,36 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202	
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)					
	Acute fish toxicity	LC50 1,4 mg/l	96 h	Cyprinus carpio (Common Carp)	ECHA	OECD 203
	Acute algae toxicity	ErC50 >2,01 mg/l	72 h	Daphnia magna (Big water flea)	ECHA	OECD 201
	Acute crustacea toxicity	EC50 3,53 mg/l	48 h	Daphnia magna (Big water flea)	ECHA	OECD 202
	Acute bacteria toxicity	(EC50 >1000 mg/l)	3 h	Activated sludge	ECHA	OECD 209

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
72869-86-4	urethane dimethacrylate (UDMA)			
	Biodegradation	22 %	28	OECD 301 F
	acrylic resin			
	OECD 301 F	27 %	56	
	Not readily biodegradable (according to OECD criteria)			
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)			
	OECD 301 F	0-10 %	28	
	Not readily biodegradable (according to OECD criteria)			

12.3. Bioaccumulative potential

The product has not been tested.

BCF

CAS No	Chemical name	BCF	Species	Source
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)	47-55		

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

The product has not been tested.

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12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Do not allow uncontrolled discharge of product into the environment. Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Small quantities can be polymerized by light and the cured solid material can be disposed of with the regular garbage. Larger quantities must be disposed of following the regulations of the local authorities. Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues; hazardous waste

List of Wastes Code - used product

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues; hazardous waste

List of Wastes Code - contaminated packaging

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues; hazardous waste

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number:	UN 3082
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLIC RESIN)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9
Classification code:	M6
Special Provisions:	274 335 375 601
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	90
Tunnel restriction code:	E

Other applicable information (land transport)

SV 375: These substances, when carried in single or combination packagings of a net quantity not exceeding 5 litres of liquids or a net mass not exceeding 5 kg of solids per single or combination packaging, are not subject to the other provisions of ADR, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 3082
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14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLIC RESIN)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9
Classification code:	M6
Special Provisions:	274 335 375 601
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 3082
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLIC RESIN)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9
Special Provisions:	274, 335, 969
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-F

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 3082
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ACRYLIC RESIN)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9
Special Provisions:	A97 A158 A197
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y964
Excepted quantity:	E1
IATA-packing instructions - Passenger:	964
IATA-max. quantity - Passenger:	450 L
IATA-packing instructions - Cargo:	964
IATA-max. quantity - Cargo:	450 L

Other applicable information (air transport)

A 197: These substances are not subject to other provisions of these Regulations when carried in single or combination packagings with a net quantity per single or inner packaging not exceeding 5L for liquids and a net weight not exceeding 5kg for substances, provided the packagings meet the general requirements of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	Yes
Danger releasing substance:	ACRYLIC RESIN

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

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Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

National regulatory information

Water hazard class (D):

2 - obviously hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 2,5,9,16.

Matter of revision: Regulation (EU) No. 2020/878, Annex II.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Skin Sens: Skin sensitisation

Repr: Reproductive toxicity

Aquatic Chronic: Chronic aquatic hazard

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H317 May cause an allergic skin reaction.

H361f Suspected of damaging fertility.

H411 Toxic to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)

Safety Data Sheet

according to Regulation (EC) No 1907/2006

picopreci plus bonder

Revision date: 12.09.2023

Product code: 1352250

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

picopreci plus bonder

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

Use of the substance/mixture

dental use

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name:	DeltaMed GmbH	
Street:	Raiffeisenstraße 8a	
Place:	61169 Friedberg	
Telephone:	+49 6031 7283-0	Telefax: +49 6031 7283-29
E-mail:	info@deltamed.de	
Internet:	www.deltamed.de	
Responsible Department:	F&E	
	Telefax +49 6031 7283-29	

Supplier

Company name:	picodent GmbH	
Street:	Lüdenscheider Str. 24-26	
Place:	51688 Wipperfürth	
Telephone:	+49 2267 6580-0	
Internet:	picodent@picodent.de	
Responsible Department:	Mo.-Fr. 7.30 - 16.45 Uhr	

1.4. Emergency telephone number: Giftinformationszentrum Universitätsklinikum Mainz
Telefon +49 6131 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Flam. Liq. 2; H225
Skin Irrit. 2; H315
Eye Dam. 1; H318
Skin Sens. 1; H317
STOT SE 3; H335
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

methyl methacrylate
2-Propenoic acid, reaction products with pentaerythritol (PETIA / PETTA)
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)

Signal word: Danger

Pictograms:



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Hazard statements

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container in accordance with local regulation.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture of acrylic resins and initiators.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
80-62-6	methyl methacrylate			40 - 60 %
	201-297-1	607-035-00-6		
	Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1, STOT SE 3; H225 H315 H317 H335			
	acrylic resin			20 - 40 %
	Eye Irrit. 2; H319			
1245638-61-2	2-Propenoic acid, reaction products with pentaerythritol (PETIA / PETTA)			< 10 %
	629-850-6			
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 2; H302 H315 H318 H317 H411			
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)			< 1 %
	278-355-8	015-203-00-X		
	Repr. 2, Skin Sens. 1B, Aquatic Chronic 2; H361f H317 H411			

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

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
80-62-6	201-297-1	methyl methacrylate	40 - 60 %
		inhalation: LC50 = 78 mg/l (vapours); dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg	
		acrylic resin	20 - 40 %
		inhalation: LC50 = > 5 mg/l (dusts or mists)	
1245638-61-2	629-850-6	2-Propenoic acid, reaction products with pentaerythritol (PETIA / PETTA)	< 10 %
		inhalation: LC50 = > 5 mg/l (dusts or mists); oral: ATE = 500 mg/kg	
75980-60-8	278-355-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)	< 1 %
		dermal: LD50 = >2000 mg/kg; oral: LD50 = > 5000 mg/kg	

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its vapours. Take off all contaminated clothing immediately.

After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. Rinse mouth immediately and drink plenty of water.

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

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), Foam, Extinguishing powder.

Unsuitable extinguishing media

Water, Full water jet

5.2. Special hazards arising from the substance or mixture

Flammable. Vapours can form explosive mixtures with air. In case of fire may be liberated: Hazardous decomposition products

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment.

6.3. Methods and material for containment and cleaning up**Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

Vapours can form explosive mixtures with air.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with: Oxidising agent.

Further information on storage conditions

Protect from the action of light. Keep only in the original container at a temperature between 4 -25 °C. Can polymerize with intense heat release.

7.3. Specific end use(s)

dental use

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limit values**

CAS No	Name of agent	ppm	mg/m ³	fib/cm ³	Category	Origin
80-62-6	Methyl methacrylate	50	-		TWA (8 h)	
		100	-		STEL (15 min)	

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DNEL/DMEL values

CAS No	Name of agent			
DNEL type		Exposure route	Effect	Value
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)			
Worker DNEL, long-term		dermal	systemic	0,233 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,145 mg/m³
Consumer DNEL, long-term		oral	systemic	0,0833 mg/kg bw/day

PNEC values

CAS No	Name of agent			
Environmental compartment				Value
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)			
Marine water				0,00014 mg/l
Freshwater sediment				0,115 mg/kg
Marine sediment				0,0115 mg/kg
Soil				0,0222 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

tightly fitting goggles

Hand protection

Gloves should be replaced regularly, especially after extended contact with the product. For each work-place a suitable glove type has to be selected.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	stinging

Test method

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	100 °C Methymethacrylat
Flammability:	not determined
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	10 °C Methymethacrylat
Auto-ignition temperature:	430 °C Methymethacrylat
Decomposition temperature:	not determined
pH-Value:	not determined

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Viscosity / kinematic:	not determined
Water solubility:	not determined
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	38,7 hPa Methylmethacrylat
(at 20 °C)	
Density (at 20 °C):	0,94 g/cm ³ Methylmethacrylat
Relative vapour density:	not determined
Particle characteristics:	not applicable

9.2. Other information

Information with regard to physical hazard classes

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

Not oxidising.

Other safety characteristics

Evaporation rate:

not determined

Solid content:

not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable, Ignition hazard.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

10.4. Conditions to avoid

Protect from the action of light. Keep only in the original container at a temperature between 4 -25 °C. Can polymerize with intense heat release.

10.5. Incompatible materials

Oxidising agent, Reducing agent, Heavy metals, Peroxides.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

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

Acute toxicity

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

ATEmix calculated

ATE (oral) 5039 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
80-62-6	methyl methacrylate				
	oral	LD50 > 5000 mg/kg	Rat		
	dermal	LD50 > 5000 mg/kg	Rat		
	inhalation (4 h) vapour	LC50 78 mg/l	RTECS		
	acrylic resin				
	inhalation (4 h) dust/mist	LC50 > 5 mg/l			
1245638-61-2	2-Propenoic acid, reaction products with pentaerythritol (PETIA / PETTA)				
	oral	ATE 500 mg/kg			
	inhalation (4 h) dust/mist	LC50 > 5 mg/l	Rat		
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)				
	oral	LD50 > 5000 mg/kg	Rat	ECHA	OECD 401
	dermal	LD50 > 2000 mg/kg	Rat	ECHA	

Irritation and corrosivity

Causes skin irritation.

Causes serious eye damage.

Sensitising effects

May cause an allergic skin reaction. (methyl methacrylate; 2-Propenoic acid, reaction products with pentaerythritol (PETIA / PETTA); Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO))

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause respiratory irritation. (methyl methacrylate)

STOT-repeated exposure

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

Aspiration hazard

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

Additional information on tests

The mixture is classified as hazardous according to Directive 1999/45/EC.

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
80-62-6	methyl methacrylate					
	Acute fish toxicity	LC50 > 79 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute crustacea toxicity	EC50 69 mg/l	48 h	Daphnia magna (Big water flea)		
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)					
	Acute fish toxicity	LC50 1,4 mg/l	96 h	Cyprinus carpio (Common Carp)	ECHA	OECD 203
	Acute algae toxicity	ErC50 >2,01 mg/l	72 h	Daphnia magna (Big water flea)	ECHA	OECD 201
	Acute crustacea toxicity	EC50 3,53 mg/l	48 h	Daphnia magna (Big water flea)	ECHA	OECD 202
	Acute bacteria toxicity	(EC50 >1000 mg/l)	3 h	Activated sludge	ECHA	OECD 209

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)			
	OECD 301 F	0-10 %	28	
	Not readily biodegradable (according to OECD criteria)			

12.3. Bioaccumulative potential

The product has not been tested.

BCF

CAS No	Chemical name	BCF	Species	Source
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)	47-55		

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

The product has not been tested.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Small quantities can be polymerized by light and the cured solid material can be disposed of with the regular garbage. Larger quantities must be disposed of following the regulations of the local authorities. Do not allow to

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enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues; hazardous waste

List of Wastes Code - contaminated packaging

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues; hazardous waste

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number: UN 1247
14.2. UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3
Classification code: F1
Limited quantity: 1 L
Transport category: 2
Hazard No: 339
Tunnel restriction code: D/E
Other applicable information (land transport)
E2

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 1247
14.2. UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3
Classification code: F1
Limited quantity: 1 L
Other applicable information (inland waterways transport)
E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 1247
14.2. UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3
Special Provisions: -
Limited quantity: 1 L
EmS: F-E, S-D
Other applicable information (marine transport)
E2

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1247
14.2. UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED
14.3. Transport hazard class(es): 3
14.4. Packing group: II

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Hazard label: 3
Limited quantity Passenger: 1 L
IATA-packing instructions - Passenger: 353
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 364
IATA-max. quantity - Cargo: 60 L

Other applicable information (air transport)

Passenger-LQ: Y341
E2

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

Additional information

Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing (Directive 92/85/EEC).

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 2,3,9,10,15.

Matter of revision: Regulation (EU) No. 2020/878, Annex II.

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Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
Flam. Liq: Flammable liquid
Acute Tox: Acute toxicity
Skin Irrit: Skin irritation
Eye Dam: Eye damage
Eye Irrit: Eye irritation
Skin Sens: Skin sensitisation
Repr: Reproductive toxicity
STOT SE: Specific target organ toxicity - single exposure
Aquatic Chronic: Chronic aquatic hazard

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Skin Irrit. 2; H315	Calculation method
Eye Dam. 1; H318	Calculation method
Skin Sens. 1; H317	Calculation method
STOT SE 3; H335	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)