

Safety Data Sheet

according to regulation (EU) No. 1907/2006

Rev. 2016-03

1. Identification of the substance/preparation and of the company/undertaking

Information on the product

Trade name: picopreci plus Bonder

Company/undertaking identification:

Deltamed GmbH
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Responsible Department:

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Universitätsklinikum Mainz

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2. Hazards identification

Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC

Indications of danger:
R phrases:

F - Highly flammable, Xi - Irritant
Highly flammable.
Irritating to eyes, respiratory system and skin.
May cause sensitisation by skin contact.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

Hazard categories:

Flammable liquid:

Skin corrosion/irritation:

Serious eye damage/eye irritation:

Respiratory/skin sensitization:

Specific target organ toxicity - single exposure:

Hazardous to the aquatic environment:

Flam. Liq. 2
Skin Irrit. 2
Eye Dam. 1
Skin Sens. 1
STOT SE 3
Aquatic Chronic 3

Hazard Statements:

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

Label elements

Hazardous components which must be listed on the label

methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate
2-Propenoic acid, reaction products with pentaerythritol
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

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Signal word:
Pictograms:



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/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection.
P302+P350	IF ON SKIN: Gently wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container in accordance with local regulation.

Other hazards

No information available.

3. Composition/information on ingredients

Mixtures

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
201-297-1	methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate	40 - 60 %
80-62-6	F - Highly flammable, Xi - Irritant R11-37/38-43	
607-035-00-6	Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1, STOT SE 3; H225 H315 H317 H335	
	acrylic resin	20 - 40 %
	Xi - Irritant R36	
	Eye Irrit. 2; H319	
629-850-6	2-Propenoic acid, reaction products with pentaerythritol	< 10 %
1245638-61-2	Xn - Harmful, Xi - Irritant, N - Dangerous for the environment R22-38-41-43-51-53	
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 2; H302 H315 H318 H317 H411	
	2-Hydroxy-2-methylpropiophenone	1 - < 5 %
7473-98-5	Xn - Harmful R22	
	Acute Tox. 4; H302	
278-355-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	< 1 %
75980-60-8	Repr. Cat. 3, N - Dangerous for the environment R62-43-51-53	
015-203-00-X	Repr. 2, Skin Sens. 1, Aquatic Chronic 2; H361 H317 H411	

Full text of R-, H- and EUH-phrases: see section 16.

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4. First aid measures

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.

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), Foam, Extinguishing powder.

Unsuitable extinguishing media

Water, Full water jet

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

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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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.

Environmental precautions

Do not allow uncontrolled discharge of product into the environment.

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Methods and material for containment and cleaning up

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

Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

7. Handling and storage

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.

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.

Advice on storage compatibility

Further information on storage conditions

Do not store together with: Oxidising agent.
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.

Specific end use(s)

dental use

8. Exposure controls/personal protection

Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
80-62-6	Methyl methacrylate	50	208		TWA (8 h)	WEL
		100	416		STEL (15 min)	WEL

Exposure controls

Appropriate engineering controls

Protective and hygiene measures

Do not breathe gas/fumes/vapour/spray.
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.

Eye/face protection

Hand protection

tightly fitting goggles
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

Respiratory protection

Wear suitable protective clothing.
In case of inadequate ventilation wear respiratory protection.

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9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state: liquid
 Colour: colourless
 Odour: stinging

pH-Value: not determined

Changes in the physical state

Melting point: not determined

Initial boiling point and boiling range: 100 °C

Flash point: 10 °C

Flammability

Solid: not applicable

Gas: not applicable

Lower explosion limits: not determined

Upper explosion limits: not determined

Ignition temperature: 430 °C

Auto-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidizing.

Vapour pressure: (at 20 °C) 38,7 hPa

Density (at 20 °C): 0,94 g/cm³

Water solubility: insoluble

Solubility in other solvents

Partition coefficient: not determined

Vapour density: not determined

Evaporation rate: not determined

Other information

Solid content: not determined

Test method

Methylmethacrylat
 Methylmethacrylat

Methylmethacrylat

Methylmethacrylat
 Methylmethacrylat

10. Stability and reactivity

Reactivity Flammable, Ignition hazard.

Chemical stability The product is stable under storage at normal ambient temperatures.

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.

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.

Incompatible materials Oxidising agent, Reducing agent., Heavy metals, Peroxide

Hazardous decomposition products No known hazardous decomposition products.

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11. Toxicological information

Information on toxicological effects

Acute toxicity

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

CAS No	Chemical name	Exposure routes	Method	Dose	Species	Source
80-62-6	methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate	oral	LD50	> 5000 mg/kg	Rat	OECD 410
		dermal	LD50	> 5000 mg/kg	Rabbit	
		inhalative (4 h) vapour	LC50	78 mg/l	Rat	RTECS
1245638-61-2	2-Propenoic acid, reaction products with pentaerythritol	oral	ATE	500 mg/kg		
7473-98-5	2-Hydroxy-2-methylpropiophenone	oral	LD50	1694 mg/kg	Rat	OECD 423
		dermal	LD50	6929 mg/kg	Rat	OECD 402
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	oral	LD50	> 5000 mg/kg	Rat	RTECS

Irritation and corrosivity

Causes skin irritation.

Causes serious eye damage.

Sensitising effects

May cause an allergic skin reaction. (methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate), (2-Propenoic acid, reaction products with pentaerythritol), (Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide)

STOT-single exposure

May cause respiratory irritation. (methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate)

Severe effects after repeated or prolonged exposure

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

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

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12. Ecological information

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

CAS No	Chemical name	Method	Dose [mg/l]	[h] [d]	Species	Source
80-62-6	methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; methyl methacrylate					
	Acute fish toxicity	LC50	> 79 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	OECD 203
	Acute algae toxicity	ErC50	> 110 mg/l	72 h	Selenastrum capricornutum	OECD 201
7473-98-5	2-Hydroxy-2-methylpropiophenone					
	Acute crustacea toxicity	EC50	69 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202
7473-98-5	2-Hydroxy-2-methylpropiophenone					
	Acute algae toxicity	ErC50	1,95 mg/l	72 h	Desmodesmus subspicatus.	OECD 201
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide					
	Acute crustacea toxicity	EC50	> 119 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202

Persistence and degradability The product has not been tested.

Bioaccumulative potential The product has not been tested.

Mobility in soil The product has not been tested.

Results of PBT and vPvB assessment The product has not been tested.

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.

13. Disposal considerations

Waste treatment methods

Advice on disposal

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

Waste disposal number of waste from 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
Classified as hazardous waste.

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Waste disposal number of 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
Classified as hazardous waste.

Contaminated packaging

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

14. Transport information

Land transport (ADR/RID)

UN number: UN 1247
UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED
Transport hazard class(es): 3
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)

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

Marine transport (IMDG)

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

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Air transport (ICAO)

UN number:	UN 1247
UN proper shipping name:	METHYL METHACRYLATE MONOMER, STABILIZED
Transport hazard class(es):	3
Packing group:	II
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

Special precautions for user No information available.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code not applicable

15. Regulatory information

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

EU regulatory information

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 contaminating class (D): 3 - highly water contaminating

Chemical safety assessment

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

16. Other information

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%

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Relevant R-phrases (Number and full text)

11	Highly flammable.
22	Harmful if swallowed.
36	Irritating to eyes.
37/38	Irritating to respiratory system and skin.
38	Irritating to skin.
41	Risk of serious damage to eyes.
43	May cause sensitisation by skin contact.
51	Toxic to aquatic organisms.
53	May cause long-term adverse effects in the aquatic environment.
62	Possible risk of impaired fertility.

Relevant H- and EUH-phrases (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.
H361	Suspected of damaging fertility or the unborn child.
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.