

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

### 1.1. Product identifier

# Light-curing material: GR-17 temporary

CAS No.: -  
EG No.: -  
INDEX No.: -  
REACH No.: -

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

Relevant identified uses: Manufacture.  
Uses advised against: Do not use for private purposes (household).

### 1.3. Details of the supplier of the safety data sheet

#### Manufacturer

pro3dure medical GmbH

Telephone: +49 (0)231 55 56 103

Telefax: -

Otto-Hahn-Straße 27  
DE 44227 Dortmund

#### Supplier (manufacturer/importer/only representative/downstream user/distributor)

pro3dure medical GmbH

Telephone: +49 (0)231 55 56 103

Telefax: -

Otto-Hahn-Straße 27  
DE 44227 Dortmund

#### Information contact

pro3dure medical GmbH

Information telephone: +49 (0)231 55 56 103

Information telefax: -

E-mail (competent person): info@pro3dure.com

Website: http://www.pro3dure.com

### 1.4. Emergency telephone number

pro3dure medical GmbH  
This number is only available during office hours.

Telephone: +49 (0)231 55 56 103

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008:  
Skin Irrit. 2; 315 ,Eye Dam. 1; 318 ,Skin Sens. 1; 317 ,STOT SE 3; 335 ,Aquatic Chronic. 3; 412

### 2.2. Label elements

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

Hazard pictograms:



GHS05

<b>Signal word:</b>	Danger	
<b>Hazard statements:</b>	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.
<b>Precautionary statements:</b>	P273	Avoid release to the environment.
	P302+352	IF ON SKIN: Wash with plenty of water/soap.
	P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P333+313	If skin irritation or rash occurs: Get medical advice/attention.
	P362+364	Take off contaminated clothing and wash it before reuse.

#### Hazardous component(s) for labelling

2-Propenoic acid, reaction products with pentaerythritol

### 2.3. Other hazards

No risks worthy of mention. Please observe the information on the safety data sheet at all times.

## SECTION 3: Composition / information on ingredients

### 3.1. Substances

not applicable

### 3.2. Mixtures

Mixture related information

#### Composition/information on ingredients

Substance:	EC-no.:	CAS-No.:	INDEX no.:	REACH-no.:	Concentration:	Classification: EC 1272/2008(CLP):
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	423-340-5	162881-26-7	015-189-00-5	01-2119489401-38-0000	< 2 %	Skin Sens. 1; 317 Aquatic Chronic. 4; 413
3,6,9-trioxaundecamethylene dimethacrylate		109-17-1			10 - 25 %	Skin Irrit. 2; 315 Skin Sens. 1; 317 Eye Irrit. 2A; 319 STOT SE 3; 335
2-Propenoic acid, reaction products with pentaerythritol	629-850-6	1245638-61-2			< 5 %	Acute Tox. 4; 302 Skin Irrit. 2; 315 Skin Sens. 1; 317 Eye Dam. 1; 318 Aquatic Chronic. 2; 411
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate	276-957-5	72869-86-4			20 - 50 %	Skin Sens. 1; 317

(Full text of H- and EUH-phrases: see section 16.)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**General information:** In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Take off immediately all contaminated clothing.

**Following inhalation:** No special measures are necessary. Seek medical attention if problems persist.  
**Following skin contact:** After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, consult a physician. Change contaminated, saturated clothing.  
**After eye contact:** No special measures are necessary. Seek medical attention if problems persist.  
**After ingestion:** No special measures are necessary. Seek medical attention if problems persist.

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

No known symptoms to date.

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

Provide fresh air. Treat symptomatically. First Aid, decontamination, treatment of symptoms.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

**Suitable extinguishing media:** Dry extinguishing powder, Carbon dioxide (CO<sub>2</sub>).  
**Unsuitable extinguishing media:** Water spray jet, Full water jet, Water, Foam.

#### 5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Water mist Carbon monoxide Carbon dioxide (CO<sub>2</sub>)

#### 5.3. Advice for firefighters

##### General information

Move undamaged containers from immediate hazard area if it can be done safely. Co-ordinate fire-fighting measures to the fire surroundings. Use water spray jet to protect personnel and to cool endangered containers.

##### Special protective equipment for firefighters:

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

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment. Remove persons to safety. Provide adequate ventilation. Keep away from unprotected people. Keep upwind. Remove all sources of ignition.

#### 6.2. Environmental precautions

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

#### 6.3. 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.

#### 6.4. Reference to other sections

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

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Advices on safe handling

Avoid contact with skin and eyes. Do not breathe gas/fumes/vapour/spray. Keep away from sources of ignition - No smoking.

### Precautions against fire and explosion

Take precautionary measures against static discharges.

## 7.2. Conditions for safe storage, including any incompatibilities

### Requirements for storage rooms and vessels

Keep container tightly closed and in a well-ventilated place. Protect against direct sunlight.

### Hints on joint storage

Do not store together with: Oxidizing agent

**Storage class:** 10-13

## 7.3. Specific end use(s)

Observe instructions for use.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limit value

Substance:	CAS-No.:	Source :	Occupational exposure limit value:[ppm]	Occupational exposure limit value:[mg/m <sup>3</sup> ]	Limitation of exposure peaks:	Remark:

#### Substance with a common (EC) occupational exposure limit value

Substance:	CAS-No.:	Source :	Occupational exposure limit value:[ppm]	Occupational exposure limit value:[mg/m <sup>3</sup> ]	Limitation of exposure peaks:	Remark:

#### DNEL-/PNEC-values

##### DNEL value

Substance:	CAS-No.:	DNEL/DMEL
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate	72869-86-4	Worker; inhalation; systemisc; 3,3 mg/m <sup>3</sup> Worker; dermal; systemisc; 1,3 mg/kg bw /24h General Population; inhalation; systemisc; 0,6 mg/m <sup>3</sup> General Population; dermal; systemisc; 0,7 mg/kg bw/24h General Population; oral; systemisc; 0,3 mg/kg bw/24h

##### PNEC Value

Substance:	CAS-No.:	PNEC
2-Propensäure, Reaktionsprodukte mit Pentaerythrit	1245638-61-2	Freshwater; 3,2 µg/l Marine water; 320 ng/l Sewage treatment plant; 10 mg/l Sediment (freshwater); 151 µg/l Sediment (marine water); 15,1 µg/l
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate	72869-86-4	Freshwater; 0,01 mg/l Marine water; 0,001 mg/l Sewage treatment plant; 3,61 mg/l Sediment (freshwater); 4,56 mg/kg Sediment Sediment (marine water); 0,46 mg/kg Sediment Soil; 0,91 mg/kg Soil

### 8.2. Exposure controls

#### Occupational exposure controls

Provide adequate ventilation as well as local exhaustion at critical locations. Technical measures and the application of suitable work processes have priority over personal protection equipment.

#### General protection and hygiene measures

When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Apply skin care products after work. Wash contaminated clothing prior to re-use.

### Personal protection equipment

#### Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

#### Hand protection

Tested protective gloves are to be worn: DIN-/EN-Norms: DIN EN 374 Suitable gloves type: Suitable material: Butyl caoutchouc (butyl rubber)

#### Eye/face protection

Tightly sealed safety glasses.

#### Body protection

For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes). Only wear fitting, comfortable and clean protective clothing. Barrier creams are not substitutes for body protection.

#### Environmental exposure controls

refer to chapter 7. No further action is necessary.

#### Consumer exposure controls

refer to chapter 7. No further action is necessary.

#### Exposure Scenario

No information available.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance:

Physical state: Liquid  
Colour: white  
Odour: characteristic  
Odour threshold: No data available

#### Safety relevant basis data

	Parameter	Value	Unit	Remark
pH:				not applicable
Melting point/freezing point:				No data available
Initial boiling point and boiling range:				No data available
Flash point:				No data available
Evaporation rate:				No data available
Flammability (solid, gas):				No data available
Explosive properties:				No data available
Lower flammability or explosive limits:				not applicable
Upper flammability or explosive limits:				not applicable
Vapour pressure:				No data available
Vapour density:				No data available
Relative density:				No data available
Density:				No data available
Solubility(ies):	:			No data available
Partition coefficient: n-octanol/water:				No data available
Auto-ignition temperature:				No data available
Decomposition temperature:				No data available

**Viscosity:** No data available  
**Metal corrosive properties** No data available  
**Oxidising properties:** No data available

## 9.2. Other information

**Bulk density:** No data available  
**Water solubility:** No data available  
**Fat solubility:** No data available  
**Solvent separation test:** No data available  
**Solvent content:** No data available  
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No known hazardous reactions.

### 10.2. Chemical stability

The substance is chemically stable under recommended conditions of storage, use and temperature.

### 10.3. Possibility of hazardous reactions

Polymerisation

### 10.4. Conditions to avoid

No special measures are necessary. Seek medical attention if problems persist. Humidity

### 10.5. Incompatible materials

No information available.

### 10.6. Hazardous decomposition products

In case of fire may be liberated: Pyrolysis products, toxic. Carbon dioxide Carbon monoxide

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

There are no data available on the preparation/mixture itself.

#### Acute toxicity

Substance:	CAS-No.:	Toxicological information
3,6,9-trioxaundecamethylene dimethacrylate	109-17-1	LD50 dermal (rabbit) > 3000 mg/kg
2-Propenoic acid, reaction products with pentaerythritol	1245638-61-2	LD50 oral (rat) 420 mg/kg
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate	72869-86-4	LD50 oral (rat) > 5000 mg/kg

#### Skin corrosion/irritation

There are no data available on the preparation/mixture itself.  
Irritant (Bridging principle "Dilution".)

#### Serious eye damage/irritation

There are no data available on the preparation/mixture itself.  
Irritant (Bridging principle "Dilution".)

#### Respiratory or skin sensitisation

May cause sensitisation especially in sensitive humans.

### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

#### Carcinogenicity

There are no data available on the preparation/mixture itself. No indication of human carcinogenicity.

Bridging principle "Dilution".

#### Germ cell mutagenicity

There are no data available on the preparation/mixture itself. No indications of human germ cell mutagenicity exist. Bridging principle "Dilution".

#### Reproductive toxicity

There are no data available on the preparation/mixture itself. No indications of human reproductive toxicity exist. Bridging principle "Dilution".

### STOT-single exposure

There are no data available on the preparation/mixture itself.

### STOT-repeated exposure

There are no data available on the preparation/mixture itself.

### Aspiration hazard

There are no data available on the preparation/mixture itself.  
Irritant (Bridging principle "Dilution".)

## SECTION 12: Ecological information

### 12.1. Toxicity

There are no data available on the preparation/mixture itself.

#### Ecotoxicity

Substance:	CAS-No.:	Ecotoxicity
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	LC50 fish (96 h) 0,09 mg/l LC50 invertebrate (48 h) 1,175 mg/l EC50 algae (96 h) 0,26 mg/l
2-Propenoic acid, reaction products with pentaerythritol	1245638-61-2	EC50 algae (96 h) 33 mg/l LC50 invertebrate (48 h) 13 mg/l LC50 fish (96 h) 3,2 mg/l
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate	72869-86-4	LC50 (Daphnia) > 1,2 mg/l EC50 algae (72 h) > 0,68 mg/l

### 12.2. Persistence and degradability

There are no data available on the preparation/mixture itself.

### 12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

### 12.4. Mobility in soil

There are no data available on the preparation/mixture itself.

### 12.5. Results of PBT and vPvB assessment

This substance does not meet the criteria for classification as PBT or vPvB.

### 12.6. Other adverse effects

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Appropriate disposal/Product:

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

**Appropriate disposal / Package:**

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

**List of proposed waste codes/waste designations according to German Regulation  
"Abfallverzeichnis-Verordnung (AVV)"**

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

**Waste code product:** 08 04 09 - waste adhesives and sealants containing organic solvents or other dangerous substances

**Waste code packaging:** 15 01 10 - packaging containing residues of or contaminated by dangerous substances

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**SECTION 14: Transport information**

**14.1. UN number**

UN No.: -

**14.2. UN proper shipping name**

ADR / RID

-  
-

IMDG / ICAO-TI / IATA-DGR

-  
-

**14.3. Transport hazard class(es)**

Hazard label(s):: -

Classification Code: -

**14.4. Packing group**

Packing Group: -

**14.5. Environmental hazards**

Labelling environmentally hazardous substances

ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR:  yes /  no

Marine Pollutant:  yes /  no

**14.6. Special precautions for user**

Land transport (ADR/RID)

Transport category: -

Special provisions: -

Tunnel restriction code: -

Limited quantity (LQ): -

Sea transport (IMDG)

EmS-No: -

Special provisions:

Limited quantity (LQ): -

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

Remark: none

## SECTION 15: Regulatory information

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

#### EU legislation

**Regulation (EC) No 166/2006 concerning the establishment of a European Pollutant Release and Transfer Register:**  
not relevant

**Regulation (EC) No 1005/2009 on substance that deplete the ozone layer:**  
not relevant

**Regulation (EC) No 648/2004 on detergents:**  
not relevant

**Regulation (EC) No 850/2004 on persistent organic pollutants:**  
not relevant

**Regulation (EU) No 649/2012 concerning the export and import of dangerous chemicals:**  
not relevant

**Restrictions according to Title VIII of Regulation (EC) No 1907/2006:**  
not relevant

#### National regulations

Observe in addition any national regulations!

### 15.2. Chemical Safety Assessment

**A chemical safety assessment has been carried out for this substance:**

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

## SECTION 16: Other information

### Relevant H- and EUH-phrases (Number and full text)

#### Hazard statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage..
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

#### Training advice

none

#### Recommended restrictions of use

No special measures are necessary.

#### Documentation of changes

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**Key literature references and sources for data**

Data arise from reference works and literature.

**Abbreviations and acronyms**

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