



according to Regulation (EC) No 1907/2006

**freeprint® cast 2.0 385 (Dental)**

Revision date: 17.12.2020

Product code: 983

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**Pictograms:****Hazard statements**

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/ container in accordance with local and national regulations.

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Chemical characterization**

Mixture of acrylic/ methacrylic resins with auxilliary matters.

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**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
41637-38-1	isopropylidenediphenol peg-2 dimethacrylate			30 - < 60 %
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1A, STOT SE 3; H315 H319 H317 H335			
72869-86-4	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahehexadecane-1,16-diyl bismethacrylate			10 - < 15 %
	276-957-5		01-2120751202-68	
	Skin Sens. 1B, Aquatic Chronic 2; H317 H411			
108-32-7	propylene carbonate			1 - < 25 %
	203-572-1	607-194-00-1	01-2119537232-48	
	Eye Irrit. 2; H319			
868-77-9	2-hydroxyethyl methacrylate			1 - < 25 %
	212-782-2	607-124-00-X		
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1; H315 H319 H317			
27813-02-1	Hydroxy propyl methacrylate			1 - < 10 %
	248-666-3		01-2119490226-37	
	Eye Irrit. 2, Skin Sens. 1; H319 H317			
6606-59-3	1,6-hexanediol dimethacrylate			1 - < 10 %
	229-551-7			
	Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H315 H319 H335			
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			0,1 - < 5 %
	278-355-8	015-203-00-X		
	Repr. 2, Skin Sens. 1B, Aquatic Chronic 2; H361f H317 H411			
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide			0,1 - < 5 %
	423-340-5	015-189-00-5	01-2119489401-38	
	Skin Sens. 1, Aquatic Chronic 4; H317 H413			

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

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**
**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 polyethylene glycol, followed by plenty of water. 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**

Rinse mouth immediately and drink plenty of water.

Seek immediately medical advice. Do not induce vomiting. In case of spontaneous vomiting take care of an unhindered flow out of the vomit (danger of suffocation).

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**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**

Co-ordinate fire-fighting measures to the fire surroundings.

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

Non-flammable.

**5.3. Advice for firefighters**

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

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

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**

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

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

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

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

Keep container tightly closed.

**Hints on joint storage**

Keep away from spontaneous flammable or combustible substances.

**Further information on storage conditions**

Keep only in the original container in a dry and well-ventilated place, away from foodstuffs. Keep away from all kind of light. An inert gas blanket should not be applied, because the stability of the product depends on the presence of oxygen (air).

**7.3. Specific end use(s)**

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Ligth-curing resin for the generative fabrication of cast objects using precision casting technology  
For use by trained specialist staff.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 8.2. Exposure controls

#### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

#### Protective and hygiene measures

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

Suitable eye protection: goggles.

#### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable are gloves of the following material: Butyl caoutchouc (butyl rubber)

#### 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:	red
Odour:	faintly like esters

#### Test method

pH-Value:	not determined
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#### Changes in the physical state

Melting point:	not determined
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Initial boiling point and boiling range:	not determined
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Flash point:	>100 °C DIN 51755
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#### Flammability

Solid:	not applicable
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Gas:	not applicable
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Lower explosion limits:	not determined
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Upper explosion limits:	not determined
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#### Auto-ignition temperature

Solid:	not applicable
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Gas:	not applicable
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Decomposition temperature:	>=190 °C
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#### Oxidizing properties

Not oxidizing.

Vapour pressure: <1 hPa  
(at 20 °C)

Density (at 20 °C): 1,1 g/cm<sup>3</sup> DIN 51757

Water solubility: insoluble

#### Solubility in other solvents

not determined

Partition coefficient: not determined

Vapour density: not determined

Evaporation rate: not determined

#### 9.2. Other information

Solid content: not determined

### 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

Reacts with : strong oxidising agents, strong alkaline or acidic materials., oxidising agents, radicals forming substances or heavy metal ions.

#### 10.4. Conditions to avoid

Ultra-violet light and daylight initiate polymerisation of the product. Therefore keep only in tightly closed containers away from any sources of light at 15°C - 28°C / 59°F - 82 °F.

#### 10.5. Incompatible materials

No information available.

#### 10.6. Hazardous decomposition products

No known hazardous decomposition products.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity

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

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
72869-86-4	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate				
	oral	LD50 mg/kg	>5000	Rat	OECD 401
	dermal	LD50 mg/kg	>2000	Rat	OECD 402
108-32-7	propylene carbonate				
	oral	LD50 mg/kg	34600	Rat	GESTIS
	dermal	LD50 mg/kg	> 23800	Rabbit	GESTIS
868-77-9	2-hydroxyethyl methacrylate				
	oral	LD50 mg/kg	5050	Rat	
	dermal	LD50 mg/kg	>3000	Rabbit	
27813-02-1	Hydroxy propyl methacrylate				
	oral	LD50 mg/kg	>2000	Rat	OECD 401
	dermal	LD50 mg/kg	>5000	Rabbit	
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide				
	oral	LD50 mg/kg	>5000	Rat	
	dermal	LD50 mg/kg	>2000	Rat	
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide				
	oral	LD50 mg/kg	>2000	Rat	OECD 401
	dermal	LD50 mg/kg	>2000	Rat	OECD 402

#### Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

#### Sensitising effects

May cause an allergic skin reaction. (isopropylidenediphenol peg-2 dimethacrylate; 7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate; 2-hydroxyethyl methacrylate; Hydroxy propyl methacrylate; diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide)

#### Carcinogenic/mutagenic/toxic effects for reproduction

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

#### STOT-single exposure

May cause respiratory irritation. (isopropylidenediphenol peg-2 dimethacrylate)

#### 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

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].

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**SECTION 12: Ecological information**
**12.1. Toxicity**

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
72869-86-4	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate					
	Acute crustacea toxicity	EC50 mg/l	>1,2	48 h	Daphnia magna (Big water flea)	OECD 202
108-32-7	propylene carbonate					
	Acute fish toxicity	LC50 mg/l	5300	96 h	Leuciscus idus (golden orfe)	IUCLID
	Acute crustacea toxicity	EC50 mg/l	>1000	48 h	Daphnia magna (Big water flea)	IUCLID
868-77-9	2-hydroxyethyl methacrylate					
	Acute fish toxicity	LC50	227 mg/l	96 h	Pimephales promelas	
27813-02-1	Hydroxy propyl methacrylate					
	Acute fish toxicity	LC50	493 mg/l	96 h	Leuciscus idus (golden orfe)	
	Acute algae toxicity	ErC50 mg/l	>97,2	72 h	Pseudokirchneriella subcapitata	OECD 201
	Acute crustacea toxicity	EC50	380 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide					
	Acute algae toxicity	ErC50 mg/l	>2,01	72 h	Scenedesmus subspicatus	
	Acute crustacea toxicity	EC50 mg/l	3,53	48 h	Daphnia magna (Big water flea)	
	Acute bacteria toxicity		(>1000 mg/l)	3 h	Activated sludge	
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide					
	Acute fish toxicity	LC50 mg/l	>0,09	96 h	Brachydanio rerio (zebra-fish)	OECD 203
	Acute algae toxicity	ErC50 mg/l	>0,26	72 h	Desmodesmus subspicatus.	OECD 201
	Acute crustacea toxicity	EC50 mg/l	>1,175	48 h	Daphnia magna (Big water flea)	OECD 202
	Crustacea toxicity	NOEC mg/l	>0,008	21 d	Daphnia magna (Big water flea)	OECD 211
	Acute bacteria toxicity		(>100 mg/l)	3 h	OECD 209	

**12.2. Persistence and degradability**

The product has not been tested.



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CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
868-77-9	2-hydroxyethyl methacrylate			
	84	%	28	
	Leicht biologisch abbaubar			
27813-02-1	Hydroxy propyl methacrylate			
	OECD	94%	28	
	Readily biodegradable (according to OECD criteria).			
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			
		0-10%	28	
	Not readily biodegradable (according to OECD criteria)			
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide			
	CO2 formation (% of the theoretical value).	1%	29	
	Not readily biodegradable (according to OECD criteria)			

#### 12.3. Bioaccumulative potential

The product has not been tested.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
108-32-7	propylene carbonate	-0,41
868-77-9	2-hydroxyethyl methacrylate	0,47
27813-02-1	Hydroxy propyl methacrylate	0,97
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	3,1
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	5,8

#### BCF

CAS No	Chemical name	BCF	Species	Source
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	47-55	Cyprinus carpio (Common Carp)	
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	<5	Cyprinus carpio (Common Carp)	OECD 305

#### 12.4. Mobility in soil

The product has not been tested.

#### 12.5. Results of PBT and vPvB assessment

Not identified as PBT/ vPvB substances

#### 12.6. 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

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.

##### Contaminated packaging

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

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### SECTION 14: Transport information

#### Land transport (ADR/RID)

<b>14.1. UN number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

#### Inland waterways transport (ADN)

<b>14.1. UN number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

#### Marine transport (IMDG)

<b>14.1. UN number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

#### Air transport (ICAO-TI/IATA-DGR)

<b>14.1. UN number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

#### **14.6. Special precautions for user**

No dangerous good in sense of this transport regulation.

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

No dangerous good in sense of this transport regulation.

### SECTION 15: Regulatory information

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

##### National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D):	3 - strongly hazardous to water
Skin resorption/Sensitization:	Causes allergic hypersensitivity reactions.

#### **15.2. Chemical safety assessment**

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

### SECTION 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

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CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

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

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	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)

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
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.
H413	May cause long lasting harmful effects to aquatic life.

#### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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