

**Safety Data Sheet**

according to UK REACH Regulation

**CreaPRINT Proto**

Revision date: 09.06.2022

Product code: CreaProto

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

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UFI: 0C57-E1UA-EW77-VWP2

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

Rapid Prototyping

**Uses advised against**

Direct manufacture of medical devices

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

Company name:	Merz Dental GmbH	
Street:	Kieferweg 1	
Place:	D-24321 Lütjenburg (GERMANY)	
Telephone:	+49-(0)4381-403-0	Telefax: +49-(0)4381-403-100
e-mail:	info@merz-dental.de	
Contact person:	Dipl. Chem Dr. Thomas Panther	Telephone: +49-(0)4381-403-448
e-mail:	Thomas.Panther@merz-dental.de	
Internet:	www.merz-dental.de	
Responsible Department:	Qualitätssicherung (Quality Assurance)	

**1.4. Emergency telephone number:** +49-(0)551-19240 (Giftinformationszentrum-Nord)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**Skin Sens. 1; H317  
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****GB CLP Regulation****Hazard components for labelling**Diurethane dimethacrylate, Mix of isomers (UDMA)  
2-[[[butylamino]carbonyl]oxy]ethyl acrylate  
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)  
Stabilisator**Signal word:** Warning**Pictograms:****Hazard statements**H317 May cause an allergic skin reaction.  
H412 Harmful to aquatic life with long lasting effects.**Precautionary statements**P280 Wear protective gloves and eye/face protection.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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P273 Avoid release to the environment.  
P302+P352 IF ON SKIN: Wash with plenty of water.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

**2.3. Other hazards**

No information available.

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

Findings: Damage to mucous membranes in the nose at 400 ppm

**Hazardous components**

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
72869-86-4	Diurethane dimethacrylate, Mix of isomers (UDMA)	50 - < 100 %		
	Skin Sens. 1, Aquatic Chronic 3; H317 H412			
63225-53-6	2-[[[(butylamino)carbonyl]oxy]ethyl acrylate	5 - < 50 %		
	Skin Irrit. 2, Eye Irrit. 2; H315 H319			
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)	1 - < 5 %		
	278-355-8	015-203-00-X		
	Repr. 2, Skin Sens. 1, Aquatic Chronic 2; H361f H317 H411			
52408-84-1	propoxylatedglycerol triacrylate	0.1 - < 1 %		
	Eye Irrit. 2, Skin Sens. 1; H319 H317			

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

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity	
	Specific Conc. Limits, M-factors and ATE			
63225-53-6		2-[[[(butylamino)carbonyl]oxy]ethyl acrylate	5 - < 50 %	
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg			
75980-60-8	278-355-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)	1 - < 5 %	
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg			

**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**

IF ON SKIN: Wash with plenty of soap and water. Take off immediately all contaminated clothing and wash it before reuse.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

**After ingestion**

Rinse mouth immediately and drink 1 glass of water.



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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.

#### **5.3. Advice for firefighters**

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

##### **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**

##### **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**

##### **For cleaning up**

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.

##### **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**

No special measures are necessary.

##### **Advice on protection against fire and explosion**

No special fire protection measures are necessary.

##### **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.

##### **Further information on handling**

Sensitivity to light (photosensitive).

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

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#### Requirements for storage rooms and vessels

Sensitivity to light (photosensitive). Keep container tightly closed. Heat (> 30 °C) or UV light should be avoided in order to prevent a spontaneous and explosive polymerisation and also to prevent the accompanying generation of heat. none UV-radiation/sunlight. Can polymerise exothermically if heated, exposed to air, sunlight or by addition or free radical initiators. Avoid high temperatures or direct sunlight.

#### Hints on joint storage

No special measures are necessary.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
128-37-0	2,6-Di-tert-butyl-p-cresol	-	10		TWA (8 h)	WEL

### 8.2. Exposure controls



#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Wear eye/face protection.

##### 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.

##### 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:	blue colourless
Odour:	characteristic

#### Test method

#### Changes in the physical state

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	255 - 275 °C EEC A.2
Flash point:	136 °C ASTM D 7094

#### Flammability

Solid/liquid:	not applicable
Gas:	not applicable

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**Self-ignition temperature**

Solid: not applicable  
Gas: not applicable

Decomposition temperature: not determined

Viscosity / dynamic: 900 mPa·s OECD 114

**Solubility in other solvents**

not determined

Partition coefficient n-octanol/water: not determined

Vapour pressure:  
(at 20 °C) 0,0032 hPaDensity: 1,09 g/cm<sup>3</sup> DIN 51757

Relative vapour density: not determined

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

Oxidizing properties

Not oxidising.

**Other safety characteristics**

Solid content: not determined

Evaporation rate: not determined

**Further Information****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**

In the presence of radical formers (e.g. peroxides, persulfates), reducing or oxidising substances and/or heavy metal ions and other polymerisation initiators as well as polymethyl methacrylates (polymer powder), polymerisation takes place under heat generation.

**10.4. Conditions to avoid**

UV-radiation/sunlight.

**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 hazard classes as defined in GB CLP Regulation**

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#### Acute toxicity

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
63225-53-6	2-[[[(butylamino)carbonyl]oxy]ethyl acrylate				
	oral	LD50 > 2000 mg/kg	Rat oral	Lieferant	OECD 401
	dermal	LD50 > 2000 mg/kg	Rabbit oral	Lieferant	OECD 402
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)				
	oral	LD50 > 5000 mg/kg	Rat	REACH Dossier	OECD 401
	dermal	LD50 > 2000 mg/kg	Rat	REACH Dossier	OECD 402

#### Additional information on tests

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

### SECTION 12: Ecological information

#### 12.1. Toxicity

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

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
72869-86-4	Diurethane dimethacrylate, Mix of isomers (UDMA)					
	Acute fish toxicity	LC50 10,1 mg/l	96 h	Danio rerio (zebrafish)	Merck	OECD 203
63225-53-6	2-[[[(butylamino)carbonyl]oxy]ethyl acrylate					
	Acute fish toxicity	LC50 3348 mg/l	96 h	Pimephales promelas (fathead minnow)	EpiSuite QSAR tool	Quantitative structure-activity relationship (QSAR)
	Acute algae toxicity	ErC50 0,294 mg/l		Pseudokirchneriella subcapitata s.	EpiSuite QSAR tool	Quantitative structure-activity relationship (QSAR)
	Acute crustacea toxicity	EC50 7306 mg/l	48 h	Daphnia magna (Big water flea)	EpiSuite QSAR tool	Quantitative structure-activity relationship (QSAR)

#### 12.2. Persistence and degradability

The product has not been tested.

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CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
72869-86-4	Diurethane dimethacrylate, Mix of isomers (UDMA)				
	OECD 301 B		22%	28	Merck
	Not readily biodegradable (according to OECD criteria)				
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)				
	OECD 301B/ ISO 9439/ EEC 92/69V, C.4-C		0 - 10 %	28	REACH Dossier
	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
63225-53-6	2-[[[(butylamino)carbonyl]oxy]ethyl acrylate	1.82
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)	3,1

**BCF**

CAS No	Chemical name	BCF	Species	Source
63225-53-6	2-[[[(butylamino)carbonyl]oxy]ethyl acrylate	7,325	n/n	EpiSuite QSAR tool
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO)	18 -55	Cyprinus carpio (Common Carp)	REACH Dossier

**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 UK REACH.

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**

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.

**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

**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)

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

##### Inland waterways transport (ADN)

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

##### Marine transport (IMDG)

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

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

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

##### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

##### 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

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

###### 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 - highly hazardous to water

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

#### SECTION 16: Other information

##### Changes

This data sheet contains changes from the previous version in section(s): 1,2,3,4,5,6,7,9,10,11,13,14,15,16.

##### 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)



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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%

**Key literature references and sources for data**

supplier (manufacturer/importer/downstream user/distributor)  
ECHA

**Classification for mixtures and used evaluation method according to GB CLP Regulation**

Classification	Classification procedure
Skin Sens. 1; H317	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.  
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 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.)*