

Safety Data Sheet

according to UK REACH Regulation

M-PRINT Proto

Revision date: 16.09.2025

Product code: Proto

Page 1 of 9

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

1.1. Product identifier

M-PRINT Proto

UFI: 32F0-26XQ-450S-U9GU

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 Luetjenburg (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:	Qualitaetssicherung (Quality Assurance)	

1.4. Emergency telephone number:

+49-(0)551-19240 (Giftinformationszentrum-Nord, Göttingen) 24h / 7d

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Repr. 1B; H360F
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
propoxylated glycerol triacrylate

Signal word: Danger

Pictograms:



Hazard statements

H317	May cause an allergic skin reaction.
H360F	May damage fertility.
H412	Harmful to aquatic life with long lasting effects.

Safety Data Sheet

according to UK REACH Regulation

M-PRINT Proto

Revision date: 16.09.2025

Product code: Proto

Page 2 of 9

Precautionary statements

P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection/face protection.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container to hazardous or special waste collection point.

Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Light-curing (meth-)acrylate mixture

Relevant ingredients

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 %
	276-957-5			
	Skin Sens. 1, Aquatic Chronic 3; H317 H412			
63225-53-6	2-[[[(butylamino)carbonyl]oxy]ethyl acrylate			5 - < 50 %
	Acute Tox. 4, Skin Sens. 1A, Aquatic Chronic 2; H332 H317 H411			
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			1 - < 5 %
	278-355-8	015-203-00-X		
	Repr. 1B, Skin Sens. 1B; H360Fd H317			
52408-84-1	propoxylated glycerol 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 %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg	
75980-60-8	278-355-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	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.

**Safety Data Sheet**

according to UK REACH Regulation

M-PRINT Proto

Revision date: 16.09.2025

Product code: Proto

Page 3 of 9

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.

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.

Safety Data Sheet

according to UK REACH Regulation

M-PRINT Proto

Revision date: 16.09.2025

Product code: Proto

Page 4 of 9

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

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 ³	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

Melting point/freezing point:	not determined
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**Safety Data Sheet**

according to UK REACH Regulation

M-PRINT Proto

Revision date: 16.09.2025

Product code: Proto

Page 5 of 9

Boiling point or initial boiling point and boiling range:	255 - 275 °C	EEC A.2
Flammability:	not applicable	
Flash point:	not applicable	
Decomposition temperature:	136 °C	ASTM D 7094
Solubility in other solvents	not determined	
Partition coefficient n-octanol/water:	not determined	
Vapour pressure:	0,0032 hPa	
(at 20 °C)		
Density:	1,09 g/cm ³	DIN 51757
Relative vapour density:	not determined	

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

Viscosity / dynamic:

900 mPa·s OECD 114

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****ATEmix calculated**

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 50 mg/l; ATE (inhalation dust/mist) > 12,5 mg/l

Safety Data Sheet

according to UK REACH Regulation

M-PRINT Proto

Revision date: 16.09.2025

Product code: Proto

Page 6 of 9

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
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide				
	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
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.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
72869-86-4	Diurethane dimethacrylate, Mix of isomers (UDMA)			
	OECD 301 B	22%	28	ECHA
	Not readily biodegradable (according to OECD criteria)			
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			
	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	0 - 10 %	28	REACH Dossier
	Not readily biodegradable (according to OECD criteria)			

Safety Data Sheet

according to UK REACH Regulation

M-PRINT Proto

Revision date: 16.09.2025

Product code: Proto

Page 7 of 9

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	3,1

BCF

CAS No	Chemical name	BCF	Species	Source
63225-53-6	2-[[[(butylamino)carbonyl]oxy]ethyl acrylate	7,325	n/h	EpiSuite QSAR tool
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	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.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:

No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4. Packing group:

No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number:

No dangerous good in sense of this transport regulation.

**Safety Data Sheet**

according to UK REACH Regulation

M-PRINT Proto

Revision date: 16.09.2025

Product code: Proto

Page 8 of 9

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.**14.4. Packing group:** No dangerous good in sense of this transport regulation.**Marine transport (IMDG)****14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.**14.4. Packing group:** No dangerous good in sense of this transport regulation.**Air transport (ICAO-TI/IATA-DGR)****14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.**14.4. Packing group:** 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**

Authorisations (REACH, annex XIV):

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

diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

Information according to Directive

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): 2.

**Safety Data Sheet**

according to UK REACH Regulation

M-PRINT Proto

Revision date: 16.09.2025

Product code: Proto

Page 9 of 9

Abbreviations and acronyms

Acute Tox: Acute toxicity
Eye Irrit: Eye irritation
Skin Sens: Skin sensitisation
Repr: Reproductive toxicity
Aquatic Chronic: Chronic aquatic hazard
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%

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
Repr. 1B; H360F	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H360F May damage fertility.
H360Fd May damage fertility. Suspected of damaging the unborn child.
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 relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)