

Safety Data Sheet

according to 29 CFR 1910.1200(g)

freeprint® model 2.0 UV

Revision date: 10/15/2021

Product code: 1062

Page 1 of 11

1. Identification

Product identifier

freeprint® model 2.0 UV

Recommended use of the chemical and restrictions on use

Use of the substance/mixture

Ligth-curing resin for the generative fabrication of dental models.

Details of the supplier of the safety data sheet

Company name:	DETAX GmbH		
Street:	Carl-Zeiss-Straße 4		
Place:	D-76275 Ettlingen		
Telephone:	+49 7243/510-0	Telefax:	+49 7243/510-100
e-mail:	post@detax.com		
Internet:	www.detax.com		
Responsible Department:	This number is only obtainable during office hours (Monday - Thursday 8.00 a.m. - 5.00 p.m., Friday 8.00 a.m. - 4.00 p.m.)		

Emergency phone number: +1-800-424-9300 (CHEMTREC worldwide)

2. Hazard(s) identification

Classification of the chemical

29 CFR Part 1910.1200

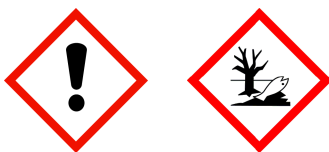
Skin corrosion/irritation: Skin Irrit. 2
 Serious eye damage/eye irritation: Eye Irrit. 2A
 Respiratory or skin sensitization: Skin Sens. 1
 Specific target organ toxicity single exposure: STOT SE 3 (respiratory tract irritation)
 Hazardous to the aquatic environment: Aquatic Chronic 2

Label elements

29 CFR Part 1910.1200

Signal word: Warning

Pictograms:



Hazard statements

Causes skin irritation
 Causes serious eye irritation
 May cause an allergic skin reaction
 May cause respiratory irritation
 Toxic to aquatic life with long lasting effects

Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray.
 Wash hands thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves/protective clothing/eye protection/face protection.
 If on skin: Wash with plenty of water.
 Take off contaminated clothing and wash it before reuse.
 If inhaled: Remove person to fresh air and keep comfortable for breathing.
 Call a poison center/doctor if you feel unwell.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

freeprint® model 2.0 UV

Revision date: 10/15/2021

Product code: 1062

Page 2 of 11

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

If exposed or concerned: Get medical advice/attention.

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/ container in accordance with local and national regulations.

Hazards not otherwise classified

No information available.

3. Composition/information on ingredients

Mixtures

Chemical characterization

Mixture of acrylic/ methacrylic resins with auxilliary matters.

Hazardous components

CAS No	Components	Quantity
72869-86-4	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahehexadecane-1,16-diyl bismethacrylate	20 - < 40 %
41637-38-1	isopropylidenediphenol peg-2 dimethacrylate	20 - < 40 %
72829-09-5	1,12-Dodecanediol Dimethacrylate	5 - < 20 %
27813-02-1	Hydroxy propyl methacrylate	0,1 - < 5 %
93962-84-6	(Octahydro-4,7-methano-1H-indenyl)methyl acrylate	0,1 - < 5 %
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	0,1 - < 5 %
868-77-9	2-hydroxyethyl methacrylate	0,1 - < 5 %
2143103-44-8	aliphatic urethane acrylate	0,1 - < 5 %
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	0,1 - < 5 %

4. First-aid measures

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 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

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).

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

Safety Data Sheet

according to 29 CFR 1910.1200(g)

freeprint® model 2.0 UV

Revision date: 10/15/2021

Product code: 1062

Page 3 of 11

Suitable extinguishing media

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

Specific hazards arising from the chemical

Non-flammable.

Special protective equipment and precautions for fire-fighters

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

Additional information

Suppress gases/vapors/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

General advice

Provide adequate ventilation. Do not breathe gas/fume/vapor/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

Environmental precautions

Do not allow to enter into surface water or drains.

Methods and material for containment and cleaning up

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.

Reference to other sections

Safe handling: see section 7

Personal protection equipment (PPE): see section 8

Disposal: see section 13

7. Handling and storage

Precautions for safe handling

Advice on safe handling

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

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, drink, smoke, sniff.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

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 lighth. An inert gas blanket should not be applied, because the stability of the product depends on the presence of oxygen (air).

8. Exposure controls/personal protection

Safety Data Sheet

according to 29 CFR 1910.1200(g)

freeprint® model 2.0 UV

Revision date: 10/15/2021

Product code: 1062

Page 4 of 11

Control parameters

Exposure controls

Appropriate engineering controls

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

Individual protection measures, such as personal protective equipment

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.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state: liquid:
Color:
Odor: faintly like esters

Test method

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined
Flammability	
Solid/liquid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	>100 °C DIN 51755
Decomposition temperature:	>=190 °C
pH-Value:	not determined
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Vapor pressure:	<1 hPa
(at 20 °C)	
Density (at 20 °C):	1,09 g/cm³ DIN 51757
Relative vapour density:	not determined

Other information

Information with regard to physical hazard classes

Safety Data Sheet

according to 29 CFR 1910.1200(g)

freeprint® model 2.0 UV

Revision date: 10/15/2021

Product code: 1062

Page 5 of 11

Explosive properties

The product is not: Explosive.

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

Not oxidizing.

Other safety characteristics

Evaporation rate:

not determined

Solid content:

not determined

10. Stability and reactivity

Reactivity

No hazardous reaction when handled and stored according to provisions.

Chemical stability

The product is stable under storage at normal ambient temperatures.

Possibility of hazardous reactions

Reacts with : strong oxidising agents, strong alkaline or acidic materials.

Conditions to avoid

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

Incompatible materials

No information available.

Hazardous decomposition products

No known hazardous decomposition products.

11. Toxicological information

Information on toxicological effects

Acute toxicity

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

ATEmix calculated

ATE (oral) 17467,9 mg/kg; ATE (dermal) 6248,5 mg/kg

Safety Data Sheet

according to 29 CFR 1910.1200(g)

freeprint® model 2.0 UV

Revision date: 10/15/2021

Product code: 1062

Page 6 of 11

CAS No	Components				
	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 >5000 mg/kg	Rat	OECD 401	
	dermal	LD50 >2000 mg/kg	Rat	OECD 402	
72829-09-5	1,12-Dodecanediol Dimethacrylate				
	oral	LD50 >2000 mg/kg	Rat		
27813-02-1	Hydroxy propyl methacrylate				
	oral	LD50 >2000 mg/kg	Rat	OECD 401	
	dermal	LD50 >5000 mg/kg	Rabbit		
93962-84-6	(Octahydro-4,7-methano-1H-indenyl)methyl acrylate				
	oral	LD50 2000 mg/kg	Rat		OECD 423
75980-60-8	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide				
	oral	LD50 >5000 mg/kg	Rat		
	dermal	LD50 >2000 mg/kg	Rat		
868-77-9	2-hydroxyethyl methacrylate				
	oral	LD50 5564 mg/kg	Rat		
	dermal	LD50 >5000 mg/kg	Rabbit		
2143103-44-8	aliphatic urethane acrylate				
	oral	LD50 >5000 mg/kg	Ratte	Lieferanten-Sicherheit sdatenblatt	OECD 401
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide				
	oral	LD50 >2000 mg/kg	Rat	OECD 401	
	dermal	LD50 >2000 mg/kg	Rat	OECD 402	

Irritation and corrosivity

- Causes skin irritation
- Causes serious eye irritation

Sensitizing effects

May cause an allergic skin reaction (7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate; isopropylidenediphenol peg-2 dimethacrylate; 1,12-Dodecanediol Dimethacrylate; Hydroxy propyl methacrylate; (Octahydro-4,7-methano-1H-indenyl)methyl acrylate; diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide; 2-hydroxyethyl methacrylate; aliphatic urethane acrylate; phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide)

Carcinogenic/mutagenic/toxic effects for reproduction

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

Specific target organ toxicity (STOT) - single exposure

May cause respiratory irritation (isopropylidenediphenol peg-2 dimethacrylate)

Safety Data Sheet

according to 29 CFR 1910.1200(g)

freeprint® model 2.0 UV

Revision date: 10/15/2021

Product code: 1062

Page 7 of 11

Specific target organ toxicity (STOT) - repeated exposure

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

Carcinogenicity (OSHA): No ingredient of this mixture is listed.

Carcinogenicity (IARC): No ingredient of this mixture is listed.

Carcinogenicity (NTP): No ingredient of this mixture is listed.

Aspiration hazard

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

Additional information on tests

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

12. Ecological information

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Safety Data Sheet

according to 29 CFR 1910.1200(g)

freeprint® model 2.0 UV

Revision date: 10/15/2021

Product code: 1062

Page 8 of 11

CAS No	Components					
	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 fish toxicity	LC50 10,1 mg/l	96 h			OECD 203
	Acute algae toxicity	ErC50 0,21 mg/l	72 h			OECD 201
	Acute crustacea toxicity	EC50 >1,2 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202	
72829-09-5	1,12-Dodecanediol Dimethacrylate					
	Acute crustacea toxicity	EC50 >100 mg/l	48 h	Daphnia		
27813-02-1	Hydroxy propyl methacrylate					
	Acute fish toxicity	LC50 493 mg/l	96 h	Leuciscus idus (golden orfe)		
	Acute algae toxicity	ErC50 >97,2 mg/l	72 h	Pseudokirchneriella subcapitata	OECD 201	
	Acute crustacea toxicity	EC50 380 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202	
93962-84-6	(Octahydro-4,7-methano-1H-indenyl)methyl acrylate					
	Acute fish toxicity	LC50 1,8 mg/l	96 h	Danio rerio (zebrafish)		OECD 203
	Acute algae toxicity	ErC50 1,15 mg/l	72 h	Pseudokirchneriella subcapitata		OECD 201
	Acute crustacea toxicity	EC50 2,64 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 >2,01 mg/l	72 h	Pseudokirchneriella subcapitata		
	Acute crustacea toxicity	EC50 3,53 mg/l	48 h	Daphnia magna (Big water flea)		
	Acute bacteria toxicity	(EC50 >1000 mg/l)	3 h	Activated sludge		
868-77-9	2-hydroxyethyl methacrylate					
	Acute fish toxicity	LC50 >100 mg/l	96 h	Oryzias latipes		OECD 203
	Acute algae toxicity	ErC50 836 mg/l	72 h	Selenastrum capricornutum		OECD 201
	Acute crustacea toxicity	EC50 380 mg/l	48 h	Daphnia magna		OECD 202
2143103-44-8	aliphatic urethane acrylate					
	Acute fish toxicity	LC50 18 mg/l	96 h	Oncorhynchus mykiss	Lieferanten-SDB	OECD 203
	Acute crustacea toxicity	EC50 15.9 mg/l	48 h	Daphnia magna	Lieferanten-SDB	OECD 202
	Acute bacteria toxicity	(EC50 25.4 mg/l)		Pseudokirchneriella subcapitata	Lieferanten-SDB	OECD 201
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide					
	Acute fish toxicity	LC50 >0,09 mg/l	96 h	Danio rerio (zebrafish)	OECD 203	
	Acute algae toxicity	ErC50 >0,26 mg/l	72 h	Desmodesmus subspicatus	OECD 201	
	Acute crustacea toxicity	EC50 >1,175 mg/l	48 h	Daphnia magna (Big water flea)	OECD 202	

Safety Data Sheet

according to 29 CFR 1910.1200(g)

freeprint® model 2.0 UV

Revision date: 10/15/2021

Product code: 1062

Page 9 of 11

	Crustacea toxicity	NOEC mg/l	>0,008	21 d	Daphnia magna (Big water flea)	OECD 211	
	Acute bacteria toxicity	(EC50 mg/l)	>100	3 h	OECD 209		

Persistence and degradability

The product has not been tested.

Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Components	Log Pow
72869-86-4	7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahehexadecane-1,16-diyl bismethacrylate	3,39
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	Components	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

Mobility in soil

The product has not been tested.

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.

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

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.

14. Transport information

U.S. DOT 49 CFR 172.101

UN number or ID number:

UN 3082

Proper shipping name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es):

9

Packing group:

III

Hazard label:

9

Marine transport (IMDG)

Safety Data Sheet

according to 29 CFR 1910.1200(g)

freeprint® model 2.0 UV

Revision date: 10/15/2021

Product code: 1062

Page 10 of 11

UN number or ID number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport hazard class(es): 9
Packing group: III
Hazard label: 9
Special Provisions: 274, 335, 969
Limited quantity: 5 L
Excepted quantity: E1
EmS: F-A, S-F

Other applicable information (marine transport)

Flash point: > 100°C

Air transport (ICAO-TI/IATA-DGR)

UN number or ID number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport hazard class(es): 9
Packing group: III
Hazard label: 9
Special Provisions: A97 A158 A197
Limited quantity Passenger: 30 kg G
Passenger LQ: Y964
Excepted quantity: E1
IATA-packing instructions - Passenger: 964
IATA-max. quantity - Passenger: 450 L
IATA-packing instructions - Cargo: 964
IATA-max. quantity - Cargo: 450 L

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes

Special precautions for user

No dangerous good in sense of this transport regulation.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No dangerous good in sense of this transport regulation.

15. Regulatory information

U.S. Regulations

National regulatory information

SARA Section 311/312 Hazards:

7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate (72869-86-4): Immediate (acute) health hazard
isopropylidenediphenol peg-2 dimethacrylate (41637-38-1): Immediate (acute) health hazard
1,12-Dodecanediol Dimethacrylate (72829-09-5): Immediate (acute) health hazard
Hydroxy propyl methacrylate (27813-02-1): Immediate (acute) health hazard
(Octahydro-4,7-methano-1H-indenyl)methyl acrylate (93962-84-6): Immediate (acute) health hazard
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8): Immediate (acute) health hazard
2-hydroxyethyl methacrylate (868-77-9): Immediate (acute) health hazard
aliphatic urethane acrylate (2143103-44-8): Immediate (acute) health hazard
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide (162881-26-7): Immediate (acute) health hazard

State Regulations

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other information

Safety Data Sheet

according to 29 CFR 1910.1200(g)

freeprint® model 2.0 UV

Revision date: 10/15/2021

Product code: 1062

Page 11 of 11

Revision date: 15.10.2021

Revision No: 1,06

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%
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation
intérieures)
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
SVHC: Substance of Very High Concern

Other data

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.)