

Printing date 09.06.2021 Version number 5 Revision: 09.06.2021

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

- · 1.1 Product identifier
 - Trade name: Technovit 2210
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.
 - · Application of the substance / the mixture Lightcuring material for fixing, filling and sealing of specimens
- · 1.3 Details of the supplier of the safety data sheet
 - · Manufacturer/Supplier:

Kulzer GmbH

Leipziger Straße 2, 63450 Hanau (Germany) Tel.: +49 (0)6181 9689-2570 (Wehrheim)

- · Informing department: email: technik.wehrheim@kulzer-dental.com
- · 1.4 Emergency telephone number: Emergency CONTACT (24-Hour-Number): +49 (0)6132-84463

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
 - · Classification according to Regulation (EC) No 1272/2008

Skin Sens. 1 H317 May cause an allergic skin reaction.

- · 2.2 Label elements
 - · Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS07

- · Signal word Warning
- · Hazard-determining components of labelling:

triethylen glycol dimethacrylate

methyl methacrylate

· Hazard statements

H317 May cause an allergic skin reaction.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

- · 2.3 Other hazards
 - Results of PBT and vPvB assessment
 - · **PBT:** Not applicable.
 - · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

Description: -

(Contd. on page 2)



Printing date 09.06.2021 Version number 5 Revision: 09.06.2021

Trade name: Technovit 2210

	(C	contd. of page 1)
· Dangerous components:		
	triethylen glycol dimethacrylate Skin Sens. 1B, H317	10-25%
EINECS: 201-297-1 Reg.nr.: 01-2119452498-28-xxxx	methyl methacrylate Flam. Lig. 2, H225 Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	≥0.1-<1%
	Oxybenzone Aquatic Acute 1, H400; Aquatic Chronic 2, H411	≥0.25-<1%

[·] Additional information For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

General information

Personal protection for the First Aider.

Instantly remove any clothing soiled by the product.

· After inhalation Supply fresh air: consult doctor in case of symptoms.

· After skin contact

Instantly wash with water and soap and rinse thoroughly.

If skin irritation or rash occurs: Get medical advice/attention.

Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor. Remove contact lenses, if present and easy to do. Continue rinsing.

After swallowing

In case of persistent symptoms consult doctor. Rinse out mouth and then drink plenty of water.

- 4.2 Most important symptoms and effects, both acute and delayed Allergic reactions
- 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
 - Suitable extinguishing agents
 - CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
 - For safety reasons unsuitable extinguishing agents Water with a full water jet.
- · 5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

Can be released in case of fire

Carbon dioxide (CO2)

Carbon monoxide (CO)

- 5.3 Advice for firefighters
 - Protective equipment:

Wear self-contained breathing apparatus. (EN 133)

Additional information

Cool endangered containers with water spray jet.

(Contd. on page 3)



Printing date 09.06.2021 Version number 5 Revision: 09.06.2021

Trade name: Technovit 2210

(Contd. of page 2)

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes and skin.

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

Keep away from ignition sources

· 6.2 Environmental precautions:

Do not allow to enter the ground/soil.

Do not allow to enter drainage system, surface or ground water.

Damp down gases/fumes/haze with water spray jet.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).

Send for recovery or disposal in suitable containers.

· 6.4 Reference to other sections

See Section 8 for information on personal protection equipment.

See Section 7 for information on safe handling

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Prevent formation of aerosols.

Avoid contact with eyes and skin.

Ensure good ventilation/exhaustion at the workplace.

Keep away from heat and direct sunlight.

· Handling

do not mix with

organic peroxides

amine

Strong bases

Strong acids

Radical initiator

reducing agent

Strong oxidizers

Water.

Information about protection against explosions and fires:

Protect from heat.

Keep ignition sources away - Do not smoke.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage

- Requirements to be met by storerooms and containers: Store in cool location.
- Information about storage in one common storage facility:

Store away from foodstuffs.

Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.

- Further information about storage conditions: Store cool (not above 25 °C).
- · 7.3 Specific end use(s) No further relevant information available.

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Printing date 09.06.2021 Version number 5 Revision: 09.06.2021

Trade name: Technovit 2210

(Contd. of page 3)

	ol paramete		ign of technical systems: No further data; see item 7.
Components with critical values that require monitoring at the workplace:			
80-62-6 methyl methacrylate			
	at Britain)		alue: 416 mg/m³, 100 ppm
Long-term va		Long-term va	alue: 208 mg/m³, 50 ppm
IOELV (European Union) Short-term			
		Long-term va	alue: 50 ppm
· DNELs			
		ycol dimethacry	•
Oral	ge.pop., l.te	-	8.33 mg/Kg (nd)
Dermal		str., l.te., syst.	13.9 mg/Kg/d (nd)
lada a la Car	ge.pop., l.te	-	8.33 mg/Kg/d (nd)
innaiative		str., l.te., syst.	48.5 mg/m3 (nd)
00 60 6	ge.pop., l.te	•	14.5 mg/m3 (nd)
80-62-6 т Oral	ethyl metha ge.pop., l.te	•	8.2 mg/Kg (nd)
Orai Dermal	•	str., l.te., syst.	8.2 mg/Kg (nd) 13.67 mg/Kg/d (nd)
Jeliliai	ge.pop., l.te	•	8.2 mg/Kg/d (nd)
Inhalativa		-	416 mg/m3 (nd)
IIIIaialive		str., I.te., syst.	348.4 mg/m3 (nd)
		str., l.te., local	208 mg/m3 (nd)
	ge.pop., ac		208 mg/m3 (nd)
	ge.pop., l.te		74.3 mg/m3 (nd)
131-57-7 (Oxybenzone		The manne (na)
Oral	ge.pop., l.te		2 mg/Kg (nd)
Dermal		str., l.te., syst.	39 mg/Kg/d (nd)
	ge.pop., l.te	•	20 mg/Kg/d (nd)
Inhalative		str., l.te., syst.	27.7 mg/m3 (nd)
	ge.pop., l.te		6.8 mg/m3 (nd)
· J	PNECs		
		ycol dimethacr	vlate
freshwater		0.016 mg/l (nd)	,
marine wa		0.002 mg/l (nd)	
STP		1.7 mg/l (nd)	
sedim., dv		0.185 mg/Kg (nd)
	w, mar.wat. 0.018 mg/Kg (nd		
soil,dw	0.027 mg/Kg (nd		
80-62-6 m	ethyl metha		
freshwatei	r (0.94 mg/l (aqua)	
	0.94 mg/l (nd)		
marine wa		0.094 mg/l (nd)	
STP		10 mg/l (nd)	



Printing date 09.06.2021 Version number 5 Revision: 09.06.2021

Trade name: Technovit 2210

	(Contd. of page 4)
sedim., dw, fre.wat.	10.2 mg/Kg (nd)
sedim., dw, mar.wat.	0.102 mg/Kg (nd)
soil,dw	1.48 mg/Kg (nd)
131-57-7 Oxybenzoi	ne n
freshwater	0.00067 mg/l (nd)
marine water	0.000067 mg/l (nd)
STP	10 mg/l (nd)
sedim., dw, fre.wat.	0.066 mg/Kg (nd)
sedim., dw, mar.wat.	0.007 mg/Kg (nd)
soil,dw	0.013 mg/Kg (nd)

[·] Additional information: The lists that were valid during the compilation were used as basis.

· 8.2 Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures should be adhered to in handling the chemicals.

Do not eat or drink while working.

Avoid contact with the eyes and skin.

Instantly remove any soiled and impregnated garments.

Keep away from foodstuffs, beverages and food.

Wash hands during breaks and at the end of the work.

Breathing equipment:

Use breathing protection in case of insufficient ventilation.

Filter A/P2

Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

chemical protection gloves are suitable, which are tested according to EN 374

Check protective gloves prior to each use for their proper condition.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

NBR: acrylonitrile-butadiene rubber (0,11 mm) Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

>30 min

- · Eye protection: eye protection (EN 166)
- Body protection: Light weight protective clothing

Limitation and supervision of exposure into the environment

Do not allow to enter the ground/soil.

Do not allow to enter drainage system, surface or ground water.



Printing date 09.06.2021 Version number 5 Revision: 09.06.2021

Trade name: Technovit 2210

(Contd. of page 5)

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SECTION 9: Physical and cher	mical properties		
9.1 Information on basic physical and chemical properties			
· General Information			
· Appearance:			
Form:	Pasty		
· Colour:	Yellowish		
· Smell:	Odourless		
· Odour threshold:	Not determined.		
· pH-value:	Not determined.		
· Change in condition			
Melting point/freezing point:	Not determined		
· Initial boiling point and boiling	range: Not determined		
· Flash point:	Not applicable		
· Inflammability (solid, gaseous)	Not applicable.		
Decomposition temperature:	Not determined.		
· Self-inflammability:	Product is not selfigniting.		
· Explosive properties:	Product is not explosive.		
· Critical values for explosion:			
· Lower:	Not determined.		
· Upper:	Not determined.		
· Steam pressure:	Not determined.		
Density	Not determined		
· Relative density	Not determined.		
· Vapour density	Not determined.		
· Evaporation rate	Not determined.		
Solubility in / Miscibility with			
· Water:	Not miscible or difficult to mix		
· Partition coefficient: n-octanol/wa	ater: Not determined.		
· Viscosity:			
· dynamic:	Not determined.		
· kinematic:	Not determined.		
9.2 Other information	No further relevant information available.		

SECTION 10: Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability

· Conditions to be avoided: No decomposition if used and stored according to specifications.

- 10.3 Possibility of hazardous reactions Exothermic polymerisation
- · 10.4 Conditions to avoid

moisture exposure

Heat, flame's and sparks.

10.5 Incompatible materials:

amine

organic peroxides Radical initiator

(Contd. on page 7)



Printing date 09.06.2021 Version number 5 Revision: 09.06.2021

Trade name: Technovit 2210

(Contd. of page 6)

reducing agent Strong bases Strong oxidizers Strong acids Water.

10.6 Hazardous decomposition products:

None Hvdrocarbons Methanole

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
 - Acute toxicity Based on available data, the classification criteria are not met.

· LD /	LD/LC50 values that are relevant for classification:			
109-16-0	109-16-0 triethylen glycol dimethacrylate			
Oral	LD50	8,300 mg/kg (rat)		
Dermal	LD50	>2,000 mg/kg (mouse)		
80-62-6 m	80-62-6 methyl methacrylate			
Oral	LD50	~7,900 mg/kg (rat)		
Dermal	LD50	>5,000 mg/kg (rab) (OECD 402)		
Inhalative	LC50/4 h	29.8 mg/l (rat)		
131-57-7	131-57-7 Oxybenzone			
Oral	LD50	>12,800 mg/kg (rat) (OECD 401)		
Dermal	LD50	>16,000 mg/kg (rabbit) (OECD 402)		

- · Primary irritant effect:
 - Skin corrosion/irritation Based on available data, the classification criteria are not met.
 - Serious eve damage/irritation

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

Respiratory or skin sensitisation

May cause an allergic skin reaction.

- Additional toxicological information:

 - · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
 · Germ cell mutagenicity Based on available data, the classification criteria are not met.
 - Carcinogenicity Based on available data, the classification criteria are not met.
 - Reproductive toxicity Based on available data, the classification criteria are not met.
 - · STOT-single exposure Based on available data, the classification criteria are not met.
 - · 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.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic t	oxicity:			
109-16-0 trie	109-16-0 triethylen glycol dimethacrylate			
EC50/21d	51.9 mg/L (daphnia) (OECD 211)			
LC50/96h	16.4 mg/l (fish) (OECD 203)			
NOEC / 21d	32 mg/l (daphnia) (OECD 211)			
ErC50 / 72 h	>100 mg/l (algae) (OECD 201)			
	(Contd. on page 8)			



Printing date 09.06.2021 Version number 5 Revision: 09.06.2021

Trade name: Technovit 2210

	(Contd. of page	
	18.6 mg/l (algae) (OECD 201)	
	72.8 mg/l (algae) (OECD 201)	
	hyl methacrylate	
EC50/21d	49 mg/L (daphnia) (OECD 211)	
EC50/48h	69 mg/l (daphnia) (EPA OTS 797.1300)	
	37 mg/l (daphnia) (OECD 211)	
ErC50 / 72 h	>110 mg/l (algae) (OECD 201)	
NOEC / 72h	110 mg/l (algae) (OECD 201)	
NOEC / 48h	48 mg/l (daphnia) (EPA OTS 797.1300)	
EbC50 / 72h	>110 mg/l (algae) (OECD 201)	
NOEC/ 35d	9.4 mg/L (fish) (OECD 210)	
LC50/ 35d	33.7 mg/L (fish) (OECD 210)	
131-57-7 Ox	ybenzone	
EC50/48h	1.87 mg/l (daphnia) (OECD 202)	
LC50/96h	3.8 mg/l (fish) (OECD 203)	
ErC50 / 72 h	0.67 mg/l (algae) (OECD 201)	
NOEC / 72h	0.18 mg/l (algae) (OECD 201)	
NOEC / 96h	0.72 mg/l (fish) (OECD 203)	
NOEC / 48h	1.15 mg/l (daphnia) (OECD 202)	
· 12.2 Persiste	ence and degradability	
109-16-0 trie	thylen glycol dimethacrylate	
Biodegradation 85 % /28d (nd) (OECD 301B; ISO/ 9439/ EEC 92/69/V, C.4-C)		
80-62-6 metl	hyl methacrylate	
•	on 94 % /14d (nd) (OECD 301C)	
131-57-7 Ox		
Biodegradation	on 60-70 % /28d (nd)	
	umulative potential	
131-57-7 Ox		
Bloconcentra	ation factor (BCF) >33-<160 (fish) (OECD 305)	

- · 12.4 Mobility in soil No further relevant information available.
 - · Additional ecological information:
 - · General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into soil.

- · 12.5 Results of PBT and vPvB assessment
 - · PBT: Not applicable.
 - · vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation Smaller quantities can be disposed with household garbage.

(Contd. on page 9)



Printing date 09.06.2021 Version number 5 Revision: 09.06.2021

Trade name: Technovit 2210

(Contd. of page 8)

· Uncleaned packagings:
· Recommendation: Disposal must be made according to official regulations.

14.1 UN-Number · ADR, IMDG, IATA	UN3532
14.2 UN proper shipping name · ADR · IMDG, IATA	3532 POLYMERIZING SUBSTANCE, LIQUID STABILIZED, N.O.S. (triethylen glycodimethacrylate, 3-trimethoxysilylpropymethacrylate) POLYMERIZING SUBSTANCE, LIQUID STABILIZED, N.O.S. (triethylen glycodimethacrylate, 3-trimethoxysilylpropymethacrylate)
14.3 Transport hazard class(es)	
· ADR	
· Class	4.1 (PM1) Flammable solids, self-reactiv substances and solid desensitise explosives.
· Label	4.1
IMDG, IATA	
· Class	4.1 Flammable solids, self-reactiv substances and solid desensitise explosives. 4.1
	7.1
14.4 Packing group · ADR, IMDG, IATA	III
14.5 Environmental hazards: Marine pollutant:	No
14.6 Special precautions for user	Warning: Flammable solids, self-reactiv substances and solid desensitised explosives.
· Kemler Number:	40
EMS Number:	F-J,S-G
Stowage Category	D
Stowage Code	SW1 Protected from sources of heat.

(Contd. on page 10)



Printing date 09.06.2021 Version number 5 Revision: 09.06.2021

Trade name: Technovit 2210

	(Contd. of page
· Segregation Code	SG35 Stow "separated from" SGG1-acids SG36 Stow "separated from" SGG18 alkalis.
14.7 Transport in bulk according to Annex l Marpol and the IBC Code	II of Not applicable.
· Transport/Additional information:	-
ADR Limited quantities (LQ) Excepted quantities (EQ)	0 Code: E0 Not permitted as Excepted Quantity
· Transport category · Tunnel restriction code	2 D
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	0 Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 3532 POLYMERIZING SUBSTANCE LIQUID, STABILIZED, N.O.S. (TRIETHYLE GLYCOL DIMETHACRYLATE, 3 TRIMETHOXYSILYLPROPY METHACRYLATE), 4.1, III

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
 - · Directive 2012/18/EU
 - · Named dangerous substances ANNEX I None of the ingredients is listed.
 - · Information about limitation of use:

Employment restrictions concerning young persons must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

· Abbreviations and acronyms:

ADR: Accord relatif au transport international 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 Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances

(Contd. on page 11)



Printing date 09.06.2021 Version number 5 Revision: 09.06.2021

Trade name: Technovit 2210

(Contd. of page 10)

ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative Flam. Liq. 2: Flammable liquids – Category 2 Skin Irrit. 2: Skin corrosion/irritation – Category 2 Skin Sens. 1: Skin sensitisation – Category 1 Skin Sens. 1B: Skin sensitisation – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Sources

(EC) 1272/2008: classification, labelling and packaging of substances and mixtures

(EC) 1907/2006: REACH

ADR/RID/ADN - IDMG - IATA: transport of dangerous goods by road, rail, inland waterway, with

maritime vessels and for the air transport

* Data compared to the previous version altered.