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Safety data sheet according to 1907/2006/EC, Article 31

Printing date 10.09.2020 Version number 4 Revision: 10.09.2020

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

- · 1.1 Product identifier
 - · Trade name: Palaseal
- · 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 Auxiliary for manufacture of dental prothesis
- · 1.3 Details of the supplier of the safety data sheet
 - Manufacturer/Supplier:

Kulzer GmbH

Leipziger Straße 2, 63450 Hanau (Germany)

Tel.: +49 (0)800 4372522

- · Informing department: E-Mail: msds@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

H225 Highly flammable liquid and vapour. Flam. Lig. 2

Skin Irrit. 2 H315 Causes skin irritation.

Eve Dam. 1 H318 Causes serious eye damage. Skin Sens. 1 H317 May cause an allergic skin reaction. Repr. 2 H361f Suspected of damaging fertility. STOT SE 3 H335 May cause respiratory irritation.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

- · 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











GHS02 GHS05 GHS07 GHS08 GHS09

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

(2,4,6-trioxo-1,3,5-triazinane-1,3,5-triyl)triethylene triacrylate

methyl methacrylate

diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide Bisphenol A Diglycidylether Diacrylate (BADGE-DA)

glycerol, propoxylated, esters with acrylic acid

Hazard statements

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H361f Suspected of damaging fertility.

H335 May cause respiratory irritation.

H411 Toxic to aquatic life with long lasting effects.

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· Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition

sources. No smoking.

P261 Avoid breathing mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection.

P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

P405 Store locked up.

· 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: Product based on methacrylates

· Dangerous components:	Dangerous components:			
EINECS: 201-297-1 Reg.nr.: 01-2119452498-28-XXXX	methyl methacrylate Flam. Liq. 2, H225 Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	≥25-≤50%		
EINECS: 254-843-6 Reg.nr.: 01-2120741502-64-xxxx	(2,4,6-trioxo-1,3,5-triazinane-1,3,5-triyl)triethylene triacrylate Eye Dam. 1, H318 Aquatic Chronic 2, H411 Skin Sens. 1B, H317	≥25-≤50%		
EINECS: 225-144-3	Bisphenol A Diglycidylether Diacrylate (BADGE-DA) Aquatic Chronic 2, H411 Skin Sens. 1, H317	<i>≥</i> 5- <i>≤</i> 10%		
	glycerol, propoxylated, esters with acrylic acid Eye Irrit. 2, H319; Skin Sens. 1, H317	≥5-<10%		
EINECS: 278-355-8 Reg.nr.: 01-2119972295-29-xxxx	diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide Repr. 2, H361f Aquatic Chronic 2, H411 Skin Sens. 1B, H317	≥3-≤5%		

[·] 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
 - · After inhalation Supply fresh air; consult doctor in case of symptoms.
 - After skin contact

Instantly rinse with water.

Seek medical treatment.

· After eye contact

Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; instantly call for medical help.

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· 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

· 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, sand, extinguishing powder. Do not use water.
 - For safety reasons unsuitable extinguishing agents Water.
- · 5.2 Special hazards arising from the substance or mixture

Can form explosive gas-air mixtures.

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

- · 5.3 Advice for firefighters
 - · Protective equipment: No special measures required.
 - · Additional information -

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.

Avoid contact with eyes and skin.

- 6.2 Environmental precautions: Prevent material from reaching sewage system, holes and cellars.
- · 6.3 Methods and material for containment and cleaning up:

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

Do not flush with water or aqueous cleansing agents

6.4 Reference to other sections

No dangerous materials are released.

See Section 8 for information on personal protection equipment.

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SECTION 7: Handling and storage

- · 7.1 Precautions for safe handling Keep containers tightly sealed.
 - Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- · 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: Not required.
 - · Further information about storage conditions:

Store cool (not above 25 °C).

Store in cool, dry conditions in well sealed containers.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

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· 8.1 Control parameters

· Comp	· Components with critical values that require monitoring at the workplace:		
	80-62-6 methyl methacrylate		
OES () S	OES () Short-term value: 416 mg/m³, 100 ppm Long-term value: 208 mg/m³, 50 ppm		
	· DNELs		
80-62-6 ı	80-62-6 methyl methacrylate		
Dermal	worker industr., l.te., syst. 74.3 mg/Kg/d (human)		

Dermal worker industr., I.te., syst. 17.5 mg/Kg/d (nd)
Inhalative worker industr., I.te., syst. 122.5 mg/m3 (nd)

Inhalative worker industr., I.te., syst. 210 mg/m3 (human)

52408-84-1 glycerol, propoxylated, esters with acrylic acid

Oral worker profess., l.te., syst. 1.39 mg/Kg (nd)
Dermal worker industr., l.te., syst. 1.92 mg/Kg/d (nd)
worker profess., l.te., syst. 1.15 mg/Kg/d (nd)
Inhalative worker industr., l.te., syst. 16.2 mg/m3 (nd)
worker profess., l.te., syst. 4.87 mg/m3 (nd)

· PNECs

80-62-6 methyl methacrylate		
freshwater	0.94 mg/l (aqua)	
55818-57-0 Bisphenol A Diglycidylether Diacrylate (BADGE-DA)		

freshwater 0.1 mg/l (nd)
marine water 0.01 mg/l (nd)
interm. wat. release
STP 10 mg/l (nd)
sedim., dw, fre.wat.
soil,dw 35.8 mg/Kg (nd)

52408-84-1 glycerol, propoxylated, esters with acrylic acid

 freshwater
 0.00574 mg/l (nd)

 marine water
 0.000574 mg/l (nd)

 interm. wat. release
 0.0574 mg/l (nd)

 STP
 10 mg/l (nd)

· 8.2 Exposure controls

Personal protective equipment

· General protective and hygienic measures

Keep away from foodstuffs, beverages and food.

Instantly remove any soiled and impregnated garments.

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

Avoid contact with the eyes and skin.

· Breathing equipment:

Not neccessary with efficient local exhaust. If exposition to vapours is possible, use breathing protective mask (filter A).

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



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· Protection of hands:

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

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

If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization.

Solvent resistant gloves

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

recommended

· 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· 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.

· For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:

Butyl rubber, BR Nitrile rubber, NBR

Eye protection: Tightly sealed safety glasses.

· Body protection: Light weight protective clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical ar	nd chemical properties
General Information	
Appearance:	
· Form:	Fluid
· Colour:	Yellow
· Smell:	Characteristic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/freezing point:	Not determined
· Initial boiling point and boiling	
· Flash point:	13 °C
· Inflammability (solid, gaseous)	Not applicable.
· Ignition temperature:	430 °C
· Decomposition temperature:	Not determined.
· Self-inflammability:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures is possible.
· Critical values for explosion:	
· Lower:	2.1 Vol %
LOWCI.	

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· Steam pressure at 20 °C:	47 hPa	
· Density at 20 °C	1.060 g/cm³	
· 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/v	vater: Not determined.	
· Viscosity:		
· dynamic at 20 °C:	11 mPas	
· kinematic:	Not determined.	
· Solvent content:		
· VOC EU	504.9 g/l	
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 No dangerous reactions known 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: None
 - Additional information:

If stored longer than recommended and/or above recommended temperature, product may polymerize generating heat.

SECTION 11: Toxicological information

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

· I D/I C	LD/LC50 values that are relevant for classification:		
80-62-6 metr	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)	
40220-08-4 (2,4,6-triox	o-1,3,5-triazinane-1,3,5-triyl)triethylene triacrylate	
Oral	LD50	>2,000 mg/kg (rat) (OECD 423)	
55818-57-0 E	55818-57-0 Bisphenol A Diglycidylether Diacrylate (BADGE-DA)		
Oral	LD0	>2,000 mg/kg (rat) (OECD 401)	
Dermal	LD0	>2,000 mg/kg (rat) (OECD 402)	
Sensitisation	Sensib.	(human)	
		(mouse) (LLNA)	
52408-84-1 g	52408-84-1 glycerol, propoxylated, esters with acrylic acid		
Oral	LD50	>2,000 mg/kg (rat) (OECD 401)	
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Dermal	LD50	>2,000 mg/kg (rabbit) (OECD 402)	(Contd. of page 6)
		,4,6- trimethylbenzoyl)phosphine oxide	
Oral	LD50	>5,000 mg/kg (rat) (OECD 401)	
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)	

- · Primary irritant effect:
 - · Skin corrosion/irritation

Causes skin irritation.

- Serious eye damage/irritation Causes serious eye damage.
- · Respiratory or skin sensitisation

May cause an allergic skin reaction.

- · 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

Suspected of damaging fertility.

STOT-single exposure

May cause respiratory irritation.

- 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

	·-········· y			
· Aquatic t	· Aquatic toxicity:			
80-62-6 metl	hyl methacrylate			
EC50/48h	69 mg/l (daphnia)			
LC50/96h	191 mg/l (fish)			
40220-08-4 (2,4,6-trioxo-1,3,5-triazinane-1,3,5-triyl)triethylene triacrylate			
EC50/48h	158.3 mg/l (daphnia) (OECD 202)			
ErC50 / 72 h	25.7 mg/l (algae) (OECD 201)			
55818-57-0 E	55818-57-0 Bisphenol A Diglycidylether Diacrylate (BADGE-DA)			
EC50/72h	>110 mg/l (algae) (OECD 201)			
LC50/96h	>79 mg/l (fish) (OECD 203)			
75980-60-8 c	75980-60-8 diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide			
EC50/48h	10,100 mg/l (algae)			
	10-100 mg/l (daphnia)			
· 12.2 Persiste	· 12.2 Persistence and degradability			
40220 00 4 /	40220 09 4/2 4 6 triovo 4 2 6 triozinano 4 2 5 triul\triothylano triografia			

40220-08-4 (2,4,6-trioxo-1,3,5-triazinane-1,3,5-triyl)triethylene triacrylate

Biodegradation 32.2 % (nd) (OECD 301F; ISO 9408/ EEC 92/69/V, C.4-D)

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

Do not allow product to reach ground water, water bodies or sewage system.

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

- · 12.5 Results of PBT and vPvB assessment
 - · PBT: Not applicable.

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- · vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
 - Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Disposal must be made according to official regulations.
- Waste disposal key number: 55512
- · European waste catalogue

18 01 06* chemicals consisting of or containing hazardous substances

- · Uncleaned packagings:
 - Recommendation:

Disposal must be made according to official regulations. Non contaminated packagings can be used for recycling.

· 14.1 UN-Number

· IMDG, IATA

· ADR, IMDG, IATA

UN1247

· 14.2 UN proper shipping name

· ADR

1247 METHYL METHACRYLATE MONOMER, STABILIZED, solution

METHYL METHACRYLATE MONOMER,

STABILIZED, solution

- · 14.3 Transport hazard class(es)
 - · ADR





Class

3 (F1) Flammable liquids.

Label

Lab

· IMDG





· Class

· Label

3 Flammable liquids.

3

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·IATA



· Class 3 Flammable liquids.

· Label

14.4 Packing group ADR, IMDG, IATA

II

· 14.5 Environmental hazards:

Marine pollutant: No

Symbol (fish and tree) Special marking (ADR): Symbol (fish and tree)

· 14.6 Special precautions for user Warning: Flammable liquids.

· Kemler Number: 339 F-E,S-D · EMS Number:

· 14.7 Transport in bulk according to Annex II of

Marpol and the IBC Code Not applicable.

· Transport/Additional information:

· ADR

Limited quantities (LQ) 1L 2 Transport category · Tunnel restriction code D/E

UN1247, METHYL METHACRYLATE UN "Model Regulation": MONOMER, STABILIZED, solution, 3, II

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
 - · Directive 2012/18/EU
 - Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
 - Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- · 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.

H318 Causes serious eye damage. H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

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H361f Suspected of damaging fertility.

H411 Toxic to aquatic life with long lasting effects.

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

IMDG. International Manufille Code to 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
ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOCV: Lenkungsabgabe auf flüchtigen organischen Verbindungen, Schweiz (Swiss Ordinance on volatile organic

compounds)

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
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation — Category 1
Eye Irrit. 2: Serious eye damage/eye irritation — Category 2
Skin Sens. 1: Skin sensitisation — Category 1
Skin Sens. 1B: Skin sensitisation — Category 1B
Repr. 2: Reproductive toxicity — Category 2
STOT SE 3: Specific target organ toxicity (single exposure) — Category 3
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard — Category 2
* Pata compared to the previous version altered

* Data compared to the previous version altered.