



**Safety Data Sheet
according to WHS Regulations**

Printing date 01.02.2021

Version number 4

Revision: 01.02.2021

Hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification

· Product identifier

· Trade name: **PalaVeneer Dentine liquid**

· Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

· Application of the substance / the mixture Manufacture of dental prothesis

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Kulzer Australia Pty Ltd
Unit 20, 53 Lorraine Street
Peakhurst, NSW 2210
Australia

Tel: +61 (0) 2 9153 0311

· Informing department: see above

· Emergency telephone number:

Poison Information Number: Australia 13 11 26 & New Zealand 0800 764 766

2 Hazard(s) Identification

· Classification of the substance or mixture

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

Skin Irrit. 2 H315 Causes skin irritation.

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

STOT SE 3 H335 May cause respiratory irritation.

· Label elements

· GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

· Hazard pictograms



GHS02 GHS07

· Signal word Danger

· Hazard-determining components of labelling:

methyl methacrylate

· Hazard statements

Highly flammable liquid and vapour.

Causes skin irritation.

May cause an allergic skin reaction.

May cause respiratory irritation.

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Use explosion-proof electrical/ventilating/lighting equipment.

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

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Specific treatment (see on this label).

Store locked up.

· Other hazards -

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- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

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3 Composition and Information on Ingredients

- **Chemical characterisation: Mixtures**

- **Description:** -

- **Dangerous components:**

CAS: 80-62-6 EINECS: 201-297-1	methyl methacrylate Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	75-90%
CAS: 2082-81-7 EINECS: 218-218-1	tetramethylene dimethacrylate Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	0-5%

- **Additional information** For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

- **Description of first aid measures**

- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact**
Wash with polyethylene glycol 400 and then rinse with copious amounts of water.
If skin irritation continues, consult a doctor.
- **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.
In case of persistent symptoms consult doctor.
- **Information for doctor**
 - **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
 - **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

- **Extinguishing media**
 - **Suitable extinguishing agents** CO₂, sand, extinguishing powder. Do not use water.
 - **For safety reasons unsuitable extinguishing agents** Water.
- **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.
- **Advice for firefighters**
 - **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
- **Additional information** -

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6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**
Keep away from ignition sources
Ensure adequate ventilation
Do not breathe vapor / mist / gas.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter drainage system, surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).
Dispose of the material collected according to regulations.
- **Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

7 Handling and Storage

- **Handling**
 - **Precautions for safe handling**
Keep containers tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Do not breathe vapor / mist / gas.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
 - **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.
- **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 oxidising agents.
 - **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

- **Control parameters**
 - **Components with critical values that require monitoring at the workplace:**

80-62-6 methyl methacrylate

NES (Australia)	Short-term value: 416 mg/m ³ , 100 ppm Long-term value: 208 mg/m ³ , 50 ppm
PEL (USA)	Long-term value: 410 mg/m ³ , 100 ppm
REL (USA)	Long-term value: 410 mg/m ³ , 100 ppm
TLV (USA)	Short-term value: 410 mg/m ³ , 100 ppm Long-term value: 205 mg/m ³ , 50 ppm (SEN) NIC-DSEN

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· DNELs

80-62-6 methyl methacrylate

Dermal	worker industr., l.te., syst.	74.3 mg/Kg/d (human)
Inhalative	worker industr., l.te., syst.	210 mg/m ³ (human)

· PNECs

80-62-6 methyl methacrylate

freshwater	0.94 mg/l (aqua)
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· Additional information: The lists that were valid during the compilation were used as basis.

· 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 necessary with efficient local exhaust. If exposition to vapours is possible, use breathing protective mask (filter A).

· 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

For the mixture of chemicals mentioned below the penetration time has to be at least 30 minutes (Permeation according to EN 374 Part 3: Level 2).
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: Safety glasses

· Body protection: Light weight protective clothing

9 Physical and Chemical Properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

· Form: Fluid

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· Colour:	Colourless
· Smell:	Characteristic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
· Melting point/freezing point:	-48 °C
· Initial boiling point and boiling range:	100 °C
· Flash point:	10 °C
· Inflammability (solid, gaseous)	Not applicable.
· Ignition temperature:	421 °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 %
· Upper:	12,5 Vol %
· Steam pressure:	3.6 hPa
· Density at 20 °C	0,949 g/cm ³
· Relative density	Not determined.
· Vapour density at 20 °C	3,5 g/cm ³
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
· Water at 20 °C:	1,6 g/l
· Partition coefficient: n-octanol/water:	1,38 log POW
· Viscosity:	
· dynamic:	Not determined.
· kinematic:	Not determined.
· Other information	No further relevant information available.

10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
 - **Conditions to be avoided:** No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
 - Reacts with peroxides and other radical forming substances
 - Exothermic polymerisation
- **Conditions to avoid** Heat, flames and sparks.
- **Incompatible materials:** Reacts with peroxides and other radical forming substances
- **Hazardous decomposition products:** None
- **Additional information:** -

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11 Toxicological Information

- Information on toxicological effects
- Acute toxicity

· LD/LC50 values that are relevant for classification:

80-62-6 methyl methacrylate

Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rab)
Inhalative	LC50/4 h	29.8 mg/l (rat)

72869-86-4 diurethandimethacrylate

Oral	LD50	>5000 mg/kg (rat)
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2082-81-7 tetramethylene dimethacrylate

Oral	LD50	10120 mg/kg (rat)
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- Primary irritant effect:
 - Skin corrosion/irritation Irritant for skin and mucous membranes.
 - Serious eye damage/irritation No irritant effect.
- Respiratory or skin sensitisation Sensitization possible by skin contact.

12 Ecological Information

- Toxicity

· Aquatic toxicity:

72869-86-4 diurethandimethacrylate

LC50/96h	10.1 mg/l (fish)
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- Persistence and degradability Not easily biodegradable
- Behaviour in environmental systems:
 - Bioaccumulative potential
Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
 - 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, even in small quantities.
Danger to drinking water if even extremely small quantities leak into soil.
- Results of PBT and vPvB assessment
 - PBT: Not applicable.
 - vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- 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.

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

14 Transport information

· UN-Number · ADG, IMDG, IATA	UN1247
· UN proper shipping name · ADG · IMDG, IATA	1247 METHYL METHACRYLATE MONOMER, STABILIZED, mixture METHYL METHACRYLATE MONOMER, STABILIZED, mixture
· Transport hazard class(es) · ADG	
	
· Class · Label	3 (F1) Flammable liquids. 3
· IMDG, IATA	
	
· Class · Label	3 Flammable liquids. 3
· Packing group · ADG, IMDG, IATA	II
· Environmental hazards: · Marine pollutant:	No
· Special precautions for user · Kemler Number: · EMS Number:	Warning: Flammable liquids. 339 F-E,S-D
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	-
· ADG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2

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· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN1247, METHYL METHACRYLATE MONOMER, STABILIZED, mixture, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **GHS label elements**

The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS02 GHS07

· **Signal word** Danger

· **Hazard-determining components of labelling:**

methyl methacrylate

· **Hazard statements**

Highly flammable liquid and vapour.

Causes skin irritation.

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Use explosion-proof electrical/ventilating/lighting equipment.

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

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Specific treatment (see on this label).

Store locked up.

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

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.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

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· 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

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)

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 Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· * Data compared to the previous version altered.

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