



**Safety Data Sheet
acc. to OSHA HCS**

Printing date 08/02/2023

Reviewed on 08/02/2023

1 Identification

· **Product identifier**

· **Trade name: PalaXtreme Liquid**

· -

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

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Kulzer GmbH

Leipziger Straße 2, 63450 Hanau (Germany)

Tel.: +49 (0)800 4372522

· **Information department:**

Tel. +1 (800) 431-1785 Fax: +1 (800) 522-1545

e-mail: customer.servicehkna@kulzer-dental.com

· **Emergency telephone number:**

Emergency CONTACT (24-Hour-Number)

ID 105860: (domestic) 1 800 535 5053 or international (001) 352 323 3500

2 Hazard(s) identification

· **Classification of the substance or mixture**

Flammable Liquids 2

H225 Highly flammable liquid and vapor.

Skin Irritation 2

H315 Causes skin irritation.

Eye Irritation 2A

H319 Causes serious eye irritation.

Sensitization - Skin 1

H317 May cause an allergic skin reaction.

Toxic to Reproduction 2

H361 Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure 3 H335 May cause respiratory irritation.

· **Label elements**

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** Danger

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

methyl methacrylate

2-[[[(butylamino)carbonyl]oxy]ethyl acrylate

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

· **Hazard statements**

Highly flammable liquid and vapor.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child.

May cause respiratory irritation.

· **Precautionary statements**

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

Avoid breathing dust/fume/gas/mist/vapors/spray

Avoid release to the environment.

Wear protective gloves / eye protection.

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Wear protective clothing.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

If eye irritation persists: Get medical advice/attention.

· **Classification system**

· **NFPA ratings for USA (scale 0-4)**



· **HMIS-Ratings (Scale 0-4)**



· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** -

· **Dangerous components:**

80-62-6	methyl methacrylate Flammable Liquids 2, H225 Skin Irritation 2, H315; Sensitization - Skin 1, H317; Specific Target Organ Toxicity - Single Exposure 3, H335	75-90%
63225-53-6	2-[[[(butylamino)carbonyl]oxy]ethyl acrylate Acute Toxicity - Inhalation 3, H331 Sensitization - Skin 1, H317	5-10%
97553-94-1	Aliphatic urethane acrylate Skin Irritation 2, H315; Eye Irritation 2A, H319	0-5%
40220-08-4	(2,4,6-trioxo-1,3,5-triazinane-1,3,5-triyl)triethylene triacrylate Eye Damage 1, H318 Sensitization - Skin 1B, H317	≥1-<3%
63393-96-4	Quaternary ammonium compounds, tri-C8-10-alkylmethyl, chlorides Acute Toxicity - Oral 3, H301 Toxic to Reproduction 2, H361 Skin Corrosion 1C, H314; Eye Damage 1, H318 Flammable Liquids 4, H227	≥0.1-<1%

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

4 First-aid measures

· **Description of first aid measures**

· **After inhalation** Supply fresh air; consult doctor in case of complaints.

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- **After skin contact**
*Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.*
- **After eye contact**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing**
*Rinse out mouth and then drink plenty of water.
If symptoms persist 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 respiratory protective device.
Wear fully protective suit.*
- **Additional information** -

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** *Prevent seepage into sewage system, workpits and cellars.*
- **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 receptacles.*
- **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 disposal information.*
-

7 Handling and storage

- **Handling**
 - **Precautions for safe handling**
*Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
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.

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Protect against electrostatic charges.

· **Conditions for safe storage, including any incompatibilities**

· **Storage**

· **Requirements to be met by storerooms and receptacles:** Store in a cool location.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

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

8 Exposure controls/personal protection

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

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

80-62-6 methyl methacrylate

PEL Long-term value: 410 mg/m³, 100 ppm

REL Long-term value: 410 mg/m³, 100 ppm

TLV Short-term value: 100 ppm

Long-term value: 50 ppm

DSEN, A4

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment**

· **General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of 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.

· **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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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- **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 goggles.
- **Body protection:** Protective work clothing.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

- **Form:** Fluid
- **Color:** Colorless
- **Odor:** Ester-like
- **Odor threshold:** Not determined.

· **pH-value:** Mixture is non-soluble (in water).

· **Change in condition**

- **Melting point/Melting range:** undetermined
- **Boiling point/Boiling range:** 100 °C (212 °F)

· **Flash point:** 10 °C (50 °F)

· **Flammability (solid, gaseous)** Not applicable.

· **Auto igniting:** 430 °C (806 °F)

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

- **Lower:** 2.1 Vol %
- **Upper:** 12.5 Vol %

· **Vapor pressure at 20 °C (68 °F):** 47 hPa (35.3 mm Hg)

· **Density:** Not determined

- **Relative density** Not determined.
- **Vapor density** Not determined.
- **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

· **Water:** Not miscible or difficult to mix

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

- **dynamic:** Not determined.
- **kinematic:** Not determined.

· **Solvent content:**

· **Water:** 0.1 %

· **Solids content:** 0.1 %

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· **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** none
- **Additional information:** -

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

80-62-6 methyl methacrylate

Oral	LD50	~7,900 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (guinea pig) (OECD 402)
Inhalative	LC50/4 h	29.8 mg/l (rat)

63225-53-6 2-[[[(butylamino)carbonyl]oxy]ethyl acrylate

Oral	LD50	>2,000-<5,000 mg/kg (rat) (OECD 423)
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40220-08-4 (2,4,6-trioxo-1,3,5-triazinane-1,3,5-triyl)triethylene triacrylate

Oral	LD50	>2,000 mg/kg (rat) (OECD 423)
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63393-96-4 Quaternary ammonium compounds, tri-C8-10-alkylmethyl, chlorides

Oral	LD50	200 mg/kg (ATE)
		>200-<2,000 mg/kg (rat) (OECD 401)

· **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Slight irritation possible
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:** Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

80-62-6	methyl methacrylate	3
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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Reproductive toxicity**

63225-53-6 2-[[[(butylamino)carbonyl]oxy]ethyl acrylate

Oral	NOAEL(C)	100 mg/kg (rat)
	NOAEL (Elterliche Toxizität)	300 mg/kg/d (rat)

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12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

80-62-6 methyl methacrylate

EC50/21d	49 mg/L (daphnia) (OECD 211)
EC50/48h	69 mg/l (daphnia) (EPA OTS 797.1300)
NOEC / 21d	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)

63225-53-6 2-[[[(butylamino)carbonyl]oxy]ethyl acrylate

EC50/72h	5.98 mg/l (algae)
LC50/96h	2.52 mg/l (fish)
NOEC / 72h	1.04 mg/l (algae)

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)
LC50/96h	9.43 mg/l (fish) (OECD 203)
ErC50 / 72 h	25.7 mg/l (algae) (OECD 201)
ErC10/72h	12.9 mg/L (algae) (OECD 201)

63393-96-4 Quaternary ammonium compounds, tri-C8-10-alkylmethyl, chlorides

EC50/48h	0.16 mg/l (daphnia) (OECD 202)
LC50/96h	0.15 mg/l (fish) (OECD 203)
ErC50 / 72 h	0.29 mg/l (algae) (OECD 201)
ErC10/72h	0.138 mg/L (algae) (OECD 201)

· **Persistence and degradability**

80-62-6 methyl methacrylate

biodegradability 94 % /14d (not defined) (OECD 301C)

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

biodegradability 14.5-19.7 % /28d (not defined) (OECD 301F; ISO 9408/ EEC 92/69/V, C.4-D)

63393-96-4 Quaternary ammonium compounds, tri-C8-10-alkylmethyl, chlorides

biodegradability 10-<20 % /60d (not defined) (OECD 301B; ISO/ 9439/ EEC 92/69/V, C.4-C)

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

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

Avoid transfer into the environment.

Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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· **Other adverse effects** No further relevant information available.

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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.

· **Uncleaned packagings:**

· **Recommendation:**

Disposal must be made according to official regulations.

Non contaminated packagings can be used for recycling.

14 Transport information

· **UN-Number**

· **DOT, ADR, IMDG, IATA**

UN1247

· **UN proper shipping name**

· **DOT**

· **ADR**

· **IMDG, IATA**

Methyl methacrylate monomer, stabilized solution
1247 METHYL METHACRYLATE MONOMER,
STABILIZED solution
METHYL METHACRYLATE MONOMER,
STABILIZED solution

· **Transport hazard class(es)**

· **DOT**



· **Class**
· **Label**

3 Flammable liquids
3

· **ADR**



· **Class**
· **Label**

3 (F1) Flammable liquids
3

· **IMDG, IATA**



· **Class**
· **Label**

3 Flammable liquids
3

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· Packing group · DOT, ADR, IMDG, IATA	II
· Environmental hazards: · Marine pollutant:	No
· Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category	Warning: Flammable liquids 33 F-E, S-E B
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	-
· ADR · Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG · 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
· UN "Model Regulation":	UN 1247 METHYL METHACRYLATE MONOMER, STABILIZED SOLUTION, 3, II

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

· Sara

· **SARA Section 355 (extremely hazardous substances)**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **TLV (Threshold Limit Value)**

80-62-6 methyl methacrylate

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· **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 vapor.

H227 Combustible liquid.

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- H301 Toxic if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H335 May cause respiratory irritation.
- H361 Suspected of damaging fertility or the unborn child.

· **Date of preparation / last revision** 08/02/2023

· **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
- DOT: US Department of Transportation
- 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)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- OSHA: Occupational Safety & Health
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- REL: Recommended Exposure Limit
- Flammable Liquids 2: Flammable liquids – Category 2
- Flammable Liquids 4: Flammable liquids – Category 4
- Acute Toxicity - Inhalation 3: Acute toxicity – Category 3
- Skin Corrosion 1C: Skin corrosion/irritation – Category 1C
- Skin Irritation 2: Skin corrosion/irritation – Category 2
- Eye Damage 1: Serious eye damage/eye irritation – Category 1
- Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
- Sensitization - Skin 1: Skin sensitisation – Category 1
- Sensitization - Skin 1B: Skin sensitisation – Category 1B
- Toxic to Reproduction 2: Reproductive toxicity – Category 2
- Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

· * **Data compared to the previous version altered.**