1 Identification

- **Product identifier**
  - **Trade name**: Palavit L liquid

- **Application of the substance / the mixture** Auxiliary for manufacture of dental prosthesis

- **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**: (Contd. on page 2)
Trade name: Palavit L liquid

Do not breathe dust/fume/gas/mist/vapours/spray. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Specific treatment (see on this label). Store locked up.

- **Hazard description:**
  - **Canadian Hazard Symbols**
    - B2 - Flammable liquid
    - D2B - Toxic material causing other toxic effects

- **Classification system**
  - **NFPA ratings for USA (scale 0-4)**
    - Health = 1
    - Fire = 3
    - Reactivity = 2
  - **HMIS-Ratings (Scale 0-4)**
    - Health = 1
    - Fire = 3
    - Reactivity = 2

- **Other hazards -**

## 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Composition based on methacrylates

- **Dangerous components:**
  - 80-62-6 methyl methacrylate >90% w/w
    - Flammable Liquids - Category 2, H225
    - Skin Irritation - Category 2, H315
    - Skin Sensitizer - Category 1, H317
    - Specific Target Organ Toxicity - Single Exposure - Category 3, H335

- **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**
    - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - **After inhalation** Supply fresh air; consult doctor in case of complaints.
  - **After skin contact** Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact** Rinse opened eye for several minutes under running water.

(Contd. on page 3)
5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
  - For safety reasons unsuitable extinguishing agents
    - Water.
    - Water with full jet.

- 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: Mount respiratory protective device.

- 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).
  - Dispose contaminated material as waste according to item 13.
  - Do not flush with water or aqueous cleansing agents
  - Send for recovery or disposal in suitable receptacles.

- Reference to other sections
  - See Section 13 for disposal information.
  - See Section 8 for information on personal protection equipment.
  -

7 Handling and storage

- Handling
  - Precautions for safe handling
    - Keep receptacles tightly sealed.
    - Ensure good ventilation/exhaustion at the workplace.
  - Information about protection against explosions and fires:
    - Keep ignition sources away - Do not smoke.
**Trade name:** Palavit L liquid

(Contd. of page 3)

- **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:**
      - Keep cool, if possible (not above 25 °C).
      - Store in cool, dry conditions in well sealed receptacles.
  - **Specific end use(s)** No further relevant information available.

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**8 Exposure controls/personal protection**

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

<table>
<thead>
<tr>
<th>Components with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-62-6 methyl methacrylate</td>
</tr>
<tr>
<td>EL (I) Short-term value: 125 ppm</td>
</tr>
<tr>
<td>Long-term value: 50 ppm</td>
</tr>
<tr>
<td>Skin, Z, A</td>
</tr>
</tbody>
</table>

- **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 cannot be calculated in advance and has therefore to be checked prior to the application.
Trade name: Palavit L liquid

- 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.
- 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: Not absolutely necessary.
- Body protection: Light weight protective clothing

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance: Fluid
    - Form: Colorless
    - Odor: Characteristic
    - Odor threshold: Not determined.
    - pH-value: Not determined.
  - 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.
  - Ignition temperature: 430.0 °C (806 °F)
  - Decomposition temperature: Not determined.
  - Auto igniting: 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 mm Hg)
  - Density at 20 °C (68 °F):
    - 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.
Trade name: Palavit L liquid

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**: Product might polymerize after considerable exceeding of recommended storage time or temperature.

11 Toxicological information
- **Information on toxicological effects**
  - **Acute toxicity**:
    - **LD/LC50 values that are relevant for classification**:
      | 80-62-6 methyl methacrylate | 99-97-8 N,N-dimethyl-p-toluidine |
      |-----------------------------|---------------------------------|
      | Oral LD50 >5000 mg/kg (rat) | Inhalative LC50/4 h 29.8 mg/l (rat) |
      | Dermal LD50 >5000 mg/kg (rab) | |
      | Inhalative LC50/4 h 29.8 mg/l (rat) | Inhalative LC50/4 h 1400 mg/l (rat) |
- **Primary irritant effect**:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: No irritating effect.
- **Sensitization**: Sensitization possible through skin contact.
- **Additional toxicological information**:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  - Harmful
  - Irritant

- **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)**
    - 80-62-6 methyl methacrylate 3
  - **NTP (National Toxicology Program)**
    - None of the ingredients is listed.
Trade name: Palavit L liquid

12 Ecological information

- **Toxicity**
  - **Aquatic toxicity:**
    - 99-97-8, N,N-dimethyl-p-toluidine
    - LC50/96h 100 mg/l (fish)

- **Persistence and degradability** No further relevant information available.
- **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.
    - Danger to drinking water if even small quantities leak into the ground.

- **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.
    - Small quantities can be polymerized with the matching system component(s) and the cured solid material can be disposed of with the regular garbage. Larger quantities must be disposed of following the regulations of the local authorities.

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

14 Transport information

- **UN-Number**
  - DOT
  - TDG, IMDG, IATA
    - UN1247
    - 1247

- **UN proper shipping name**
  - TDG
    - 1247 METHYL METHACRYLATE MONOMER, STABILIZED, solution
  - IMDG, IATA
    - METHYL METHACRYLATE MONOMER, STABILIZED, solution
Trade name: Palavit L liquid

- Transport hazard class(es)
  - DOT
    - Class
    - Label
  - TDG (Transport dangerous goods):
    - Class
    - Label
  - IMDG, IATA
    - Class
    - Label

- Packing group
  - DOT, TDG, IMDG, IATA

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user
  - Warning: Flammable liquids
  - EMS Number: F-E,S-D

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not applicable.

- Transport/Additional information:

- UN "Model Regulation": UN1247, Methyl methacrylate monomer, stabilized, solution, 3, II

15 Regulatory information

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

  - SARA Section 355 (extremely hazardous substances)

  None of the ingredients is listed.
## GHS label elements

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

### Hazard pictograms

![GHS Pictograms](image)

- **GHS02**
- **GHS07**
- **GHS08**

### Signal word

**Danger**

### Hazard-determining components of labeling:

- methyl methacrylate
- N,N-dimethyl-p-toluidine

### Hazard statements

- Highly flammable liquid and vapour.
- Causes skin irritation.
- May cause an allergic skin reaction.
- May cause respiratory irritation.
- May cause damage to organs through prolonged or repeated exposure.

### Precautionary statements

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Use explosion-proof [electrical/ventilating/lighting] equipment.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.
- H335 May cause respiratory irritation.

### Date of preparation / last revision

06/03/2017 / 2

### Abbreviations and acronyms:

- 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)
- WHMIS: Workplace Hazardous Materials Information System (Canada)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic

### Abbreviations and acronyms (continued)

- CDN
Trade name: Palavit L liquid

vPvB: very Persistent and very Bioaccumulative

* Data compared to the previous version altered.