



**Safety Data Sheet  
according to WHS Regulations**

Printing date 10.02.2018

Version number 4

Revision: 10.02.2018

Hazardous according to criteria of Australian Safety and Compensation Council.

## 1 Identification

### · Product identifier

· Trade name: **Signum liquid**

· 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

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

#### · Manufacturer/Supplier:

Heraeus Kulzer Australia Pty Ltd  
Unit 32  
11 – 21 Underwood Rd  
HOMEBUSH NSW 2140  
Australia

Tel: +61 (0) 2 9764 5222

· Informing department: see above

· Emergency telephone number: Emergency contact number: 13 11 26 (24 hours)

## 2 Hazard(s) Identification

### · Classification of the substance or mixture

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

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

### · Label elements

#### · GHS label elements

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

#### · Hazard pictograms



GHS07

· Signal word Warning

· Hazard-determining components of labelling:  
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

#### · Hazard statements

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

#### · Precautionary statements

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

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see on this label).

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

Take off contaminated clothing and wash before reuse.

### · Other hazards -

#### · Results of PBT and vPvB assessment

· PBT: Not applicable.

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· **vPvB:** Not applicable.

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### 3 Composition and Information on Ingredients

- **Chemical characterisation: Mixtures**
- **Description:** Product based on methacrylates

- **Dangerous components:**

CAS: 28961-43-5	propylidynetrimethanol, ethoxylated, esters with acrylic acid Eye Irrit. 2A, H319	10-25%
CAS: 2082-81-7 EINECS: 218-218-1	tetramethylene dimethacrylate Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	10-25%
CAS: 75980-60-8 EINECS: 278-355-8	diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide Repr. 2, H361; Skin Sens. 1B, H317	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**
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** Instantly rinse with water.
- **After eye contact**  
Rinse opened eye for several minutes under running water. If symptoms persist, 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**  
CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.  
Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
  - **Protective equipment:** No special measures required.
- **Additional information -**

### 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Prevent material from reaching sewage system, holes and cellars.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).
- **Reference to other sections**  
No dangerous materials are released.  
See Section 8 for information on personal protection equipment.

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## 7 Handling and Storage

- **Handling**
  - **Precautions for safe handling** Keep containers tightly sealed.
  - **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
  - **Storage**
    - **Requirements to be met by storerooms and containers:** No special requirements.
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:** Store cool (not above 25 °C).
  - **Specific end use(s)** No further relevant information available.

## 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
  - **Components with critical values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
    - **Additional information:** The lists that were valid during the compilation were used as basis.
- **Exposure controls**
  - **Personal protective equipment**
    - **General protective and hygienic measures**  
Avoid contact with the eyes.  
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:**  
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 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:** Protective goggles are recommended.

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· **Body protection:** Light weight protective clothing

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### 9 Physical and Chemical Properties

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

· **General Information**

· **Appearance:**

· **Form:**

Fluid

· **Colour:**

Colourless

· **Smell:**

Ester-like

· **Odour threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition**

· **Melting point/freezing point:**

Not determined

· **Initial boiling point and boiling range:** 100 °C

· **Flash point:**

136 °C

· **Inflammability (solid, gaseous)**

Not applicable.

· **Ignition temperature:**

265.0 °C

· **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 at 20 °C:**

40 hPa

· **Density at 20 °C**

0.850 g/cm<sup>3</sup>

· **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/water:** Not determined.

· **Viscosity:**

· **dynamic:**

Not determined.

· **kinematic:**

Not determined.

· **Solvent content:**

· **Solids content:**

10.8 %

· **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** No dangerous reactions known

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- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** None
- **Additional information:**  
If stored longer than recommended and/or above recommended temperature, product may polymerize generating heat.

**11 Toxicological Information**

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

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

<b>2530-85-0 3-trimethoxysilylpropyl methacrylate</b>		
Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (can)
<b>2082-81-7 tetramethylene dimethacrylate</b>		
Oral	LD50	10120 mg/kg (rat)
<b>53879-55-3 penta erythritol, propoxylated, tetraacrylate</b>		
Oral	LD50	>2000 mg/kg (rat)
<b>41137-60-4 diurethandimethacrylate</b>		
Oral	LD50	>5000 mg/kg (rat)
<b>amorphe Kieselsäure</b>		
Oral	LD50	>5000 mg/kg (rat)
<b>75980-60-8 diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide</b>		
Oral	LD50	> 5000 mg/kg (rat)

- **Primary irritant effect:**
  - **Skin corrosion/irritation** No irritant effect.
  - **Serious eye damage/irritation** Irritant effect.
  - **Respiratory or skin sensitisation** No sensitizing effect known.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:  
Irritant

**12 Ecological Information**

- **Toxicity**

- **Aquatic toxicity:**

<b>75980-60-8 diphenyl(2,4,6- trimethylbenzoyl)phosphine oxide</b>		
EC50/48h	10	100 mg/l (algae)
	10	100 mg/l (daphnia)

- **Persistence and degradability** No further relevant information available.
- **Behaviour 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 bodies or sewage system.  
Danger to drinking water if even small quantities leak into soil.

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- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
- **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.
- **Uncleaned packagings:**
  - **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- |  |                 |
|--|-----------------|
| · <b>UN-Number</b> <ul style="list-style-type: none"><li>· ADG, ADN, IMDG, IATA</li></ul>                                  | Void            |
| · <b>UN proper shipping name</b> <ul style="list-style-type: none"><li>· ADG, ADN, IMDG, IATA</li></ul>                    | Void            |
| · <b>Transport hazard class(es)</b> <ul style="list-style-type: none"><li>· ADG, ADN, IMDG, IATA</li><li>· Class</li></ul> | Void            |
| · <b>Packing group</b> <ul style="list-style-type: none"><li>· ADG, IMDG, IATA</li></ul>                                   | Void            |
| · <b>Environmental hazards:</b> <ul style="list-style-type: none"><li>· <b>Marine pollutant:</b></li></ul>                 | No              |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>  | Not applicable. |
| · <b>Transport/Additional information:</b>   | -               |
| · <b>UN "Model Regulation":</b>  | Void            |

### 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**



GHS07

- **Signal word** Warning

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- **Hazard-determining components of labelling:**  
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
- **Hazard statements**  
Causes skin irritation.  
Causes serious eye irritation.  
May cause an allergic skin reaction.
- **Precautionary statements**  
Avoid breathing dust/fume/gas/mist/vapours/spray.  
Wear protective gloves/protective clothing/eye protection/face protection.  
**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Specific treatment (see on this label).  
If skin irritation or rash occurs: Get medical advice/attention.  
Take off contaminated clothing and wash before reuse.
- **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**  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H361 Suspected of damaging fertility or the unborn child.
- **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  
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)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
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  
Skin Sens. 1B: Skin sensitisation – Category 1B  
Repr. 2: Reproductive toxicity – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- **\* Data compared to the previous version altered.**