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

1.1 Product identifier
   Trade name
   Aurofilm

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Relevant identified uses of the substance or mixture
   Manufacturing of dental prosthesis in a dental laboratory

1.3 Details of the supplier of the safety data sheet
   Address
   BEGO Bremer Goldschlägerei
   Wilh. Herbst GmbH & Co. KG
   Wilhelm-Herbst-Str. 1
   28359 Bremen
   Telephone no. +49/ 421/ 2028 – 0
   Fax no. +49/ 421/ 2028 – 115
   Information provided by / telephone
   Research & Development Department - Materials, alloys and ceramics; +49/ 421/ 2028 – 130 (Chief Development Officer alloys)
   Advice on Safety Data Sheet
   msds@bego.com

1.4 Emergency telephone number
   For medical advice (in German and English):
   +49/ 551/ 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   Classification in accordance with Directive 67/548/EEC or 1999/45/EC
   R10
   R67
   Xi; R41

2.2 Label elements
   Labelling according to Directive 1999/45/EC

   Hazard symbols
   !

   R phrases
   10 Flammable.
   41 Risk of serious damage to eyes.
   67 Vapours may cause drowsiness and dizziness.

   S phrases
   7/9 Keep container tightly closed and in a well-ventilated place.
   16 Keep away from sources of ignition — No smoking.
   23.6 Do not breathe vapour/spray.
   26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
   51 Use only in well-ventilated areas.
   39 Wear eye/face protection.
   24/25 Avoid contact with skin and eyes.
**Supplemental label elements**
Contains: TRIISOBUTYLPHOSPHAT - May produce an allergic reaction.

### 2.3 Other hazards

- **PBT assessment**
  - No data available.
- **vPvB assessment**
  - No data available.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances
Not applicable. The product is not a substance.

### 3.2 Mixtures

#### Chemical characterization

**Mixture (preparation)**

**Hazardous ingredients**

<table>
<thead>
<tr>
<th>No</th>
<th>Substance name</th>
<th>CAS / EC / Index / REACH no</th>
<th>Classification 67/548/EEC</th>
<th>Concentration %</th>
<th>%-b.w.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>n-propanol, propan-1-ol</td>
<td>71-23-8 200-746-9 603-003-00-0</td>
<td>F; R11 Xi; R41 R67</td>
<td>&gt; 70.00 - &lt; 90.00</td>
<td>%-b.w.</td>
</tr>
</tbody>
</table>

Full text for all R-phrases: pls. see section 16

### Additional ingredients

<table>
<thead>
<tr>
<th>No</th>
<th>Substance name</th>
<th>CAS / EC / Index / REACH no</th>
<th>Classification 67/548/EEC</th>
<th>Concentration %</th>
<th>%-b.w.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TRIISOBUTYLPHOSPHAT</td>
<td>126-71-6 204-798-3</td>
<td>R43</td>
<td>&lt; 1.00</td>
<td>%-b.w.</td>
</tr>
</tbody>
</table>

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information
In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. If the patient is likely to become unconscious, place and transport in stable sideways position.

**After inhalation**
Remove affected person from the immediate area. Ensure supply of fresh air. Irregular breathing/no breathing: artificial respiration. Summon a doctor immediately.

**After skin contact**
Wash off immediately with soap and water.

**After eye contact**
Remove contact lenses, irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart and seek medical advice.

**After ingestion**
Do not induce vomiting. Summon a doctor immediately. Never give anything by mouth to an unconscious person.
4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of any immediate medical attention and special treatment needed
No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Carbon dioxide; extinguishing powder; Water spray jet; Alcohol-resistant foam

Unsuitable extinguishing media
Full water jet

5.2 Special hazards arising from the substance or mixture
In the event of fire, the following can be released: Carbon monoxide and carbon dioxide; Formaldehyde

5.3 Advice for firefighters

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Keep away sources of ignition. Refer to protective measures listed in sections 7 and 8.

For emergency responders
No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions
Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3 Methods and material for containment and cleaning up
Ensure adequate ventilation. Pick up rest with absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). When picked up, treat material as prescribed under heading "Disposal considerations".

6.4 Reference to other sections
No data available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling
Provide good ventilation of working area (local exhaust ventilation, if necessary). If workplace exposure limits are exceeded, respiratory protection approved for this particular job must be worn. Product inherent handling risks must be minimised taking the appropriate measures for protection and preventive actions. The working process should be designed to rule out the release of hazardous substances or skin contact as far it is possible by the state of the art.

General protective and hygiene measures
Wash hands before breaks and after work. Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Avoid contact with eyes and skin. Remove soiled or soaked clothing immediately. Do not inhale vapours. Provide eye wash fountain in work area. Have emergency shower available.

Advice on protection against fire and explosion
Take precautionary measures against electrostatic loading (earthing necessary during loading operations). Vapours can form an explosive mixture with air. Keep away from sources of heat and ignition.

7.2 Conditions for safe storage, including any incompatibilities
Technical measures and storage conditions
Keep container tightly closed and dry in a cool, well-ventilated place. Protect from heat and direct sunlight.
Requirements for storage rooms and vessels
Keep only in the original container. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on storage assembly
Do not store together with: oxidizing substances; explosive substances; spontaneously combusting substances; flammable toxic substances; inflammatory substances; Oxidizing agents

7.3 Specific end use(s)
No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

<table>
<thead>
<tr>
<th>No</th>
<th>Substance name</th>
<th>CAS no.</th>
<th>EC no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>n-propanol, propan-1-ol</td>
<td>71-23-8</td>
<td>200-746-9</td>
</tr>
</tbody>
</table>

List of approved workplace exposure limits (WELs) / EH40

<table>
<thead>
<tr>
<th>Propan-1-ol</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEL</td>
</tr>
<tr>
<td>TWA</td>
</tr>
</tbody>
</table>

Skin resorption / sensibilisation

8.2 Exposure controls

Appropriate engineering controls
No data available.

Personal protective equipment

Respiratory protection
If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection
Safety glasses with side protection shield (EN 166)

Hand protection
Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Other
Normal chemical work clothing.

Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Form/Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>liquid</td>
</tr>
<tr>
<td>pink</td>
</tr>
</tbody>
</table>

Odour
alkohol-like
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH value</td>
<td>6.6</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point / melting range</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition point / decomposition range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Value 30 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>Value 0.828 g/cm³</td>
</tr>
<tr>
<td></td>
<td>Reference temperature 20 °C</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Value 2.4 mPa·s</td>
</tr>
<tr>
<td></td>
<td>Reference temperature 20 °C</td>
</tr>
<tr>
<td></td>
<td>Type dynamic</td>
</tr>
<tr>
<td></td>
<td>Value 2.9 mm²/s</td>
</tr>
<tr>
<td></td>
<td>Reference temperature 20 °C</td>
</tr>
<tr>
<td></td>
<td>Type kinematic</td>
</tr>
</tbody>
</table>
9.2 Other information

9.2.1 Other information

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
No data available.

10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
Heat, naked flames and other ignition sources. Protect from sun.

10.5 Incompatible materials
Earth alkali metals; Alkali metals; Oxidizing agents

10.6 Hazardous decomposition products
In case of fire the following can be released: Formaldehyde

SECTION 11: Toxicological information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute oral toxicity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50</td>
<td>1870 mg/kg</td>
</tr>
<tr>
<td>Species</td>
<td>rat</td>
</tr>
<tr>
<td>Reference substance</td>
<td>1-propanol</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acute dermal toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50</td>
</tr>
<tr>
<td>Species</td>
</tr>
<tr>
<td>Reference substance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acute inhalational toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
</tr>
<tr>
<td>Duration of exposure</td>
</tr>
<tr>
<td>Species</td>
</tr>
<tr>
<td>Reference substance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skin corrosion/irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
</tr>
<tr>
<td>Reference substance</td>
</tr>
<tr>
<td>Evaluation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Serious eye damage/irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
</tr>
<tr>
<td>Reference substance</td>
</tr>
<tr>
<td>Evaluation</td>
</tr>
</tbody>
</table>
### Respiratory or skin sensitisation

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Species</th>
<th>Reference substance</th>
<th>Method</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory tract</td>
<td>guinea pig</td>
<td>1-propanol</td>
<td>maximization test</td>
<td>Non-sensitizing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Species</th>
<th>Reference substance</th>
<th>Method</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>guinea pig</td>
<td>1-propanol</td>
<td>maximization test</td>
<td>Non-sensitizing</td>
</tr>
</tbody>
</table>

### Germ cell mutagenicity
No data available

### Reproduction toxicity
No data available

### Carcinogenicity
No data available

### STOT-single exposure
No data available

### STOT-repeated exposure
No data available

### Aspiration hazard
No data available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure
Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. Inhalation of vapours may lead to headache, drowsiness and dizziness. Possibility of sensitisation through skin contact. Danger of acute eye damage. Inhalation of vapours in higher concentration may lead to irritation of eyes, nose and respiratory tract.

### SECTION 12: Ecological information

#### 12.1 Toxicity

**Fish toxicity**

<table>
<thead>
<tr>
<th>LC50</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>4480 mg/l</td>
<td>Pimephales promelas</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Duration of exposure</th>
<th>96 h</th>
</tr>
</thead>
</table>

**Daphnia toxicity**

<table>
<thead>
<tr>
<th>EC50</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>3644 mg/l</td>
<td>Daphnia magna</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Duration of exposure</th>
<th>48 h</th>
</tr>
</thead>
</table>

**Algae toxicity**

<table>
<thead>
<tr>
<th>EC50</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100 mg/l</td>
<td>Scenedesmus quadricauda</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Duration of exposure</th>
<th>168 h</th>
</tr>
</thead>
</table>
**12.2 Persistence and degradability**

<table>
<thead>
<tr>
<th>Biodegradability</th>
<th>Value</th>
<th>Duration</th>
<th>Reference substance</th>
<th>Method</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>83 - 92</td>
<td>28 d</td>
<td>1-propanol</td>
<td>OECD 301 F</td>
<td>readily biodegradable</td>
</tr>
</tbody>
</table>

**12.3 Bioaccumulative potential**

No data available.

**12.4 Mobility in soil**

No data available.

**12.5 Results of PBT and vPvB assessment**

<table>
<thead>
<tr>
<th>Results of PBT and vPvB assessment</th>
<th>PBT assessment</th>
<th>vPvB assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No data available.</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

**12.6 Other adverse effects**

No data available.

**12.7 Other information**

Do not discharge into the drains or waters and do not store on public depositories.

### SECTION 13: Disposal considerations

**13.1 Waste treatment methods**

- **Product**
  Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

- **Packaging**
  Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

### SECTION 14: Transport information

**14.1 Transport ADR/RID/ADN**

- **Class** 3
- **Classification code** F1
- **Packing group** III
- **Hazard identification no.** 30
- **UN number** UN1274
- **Technical name** n-PROPAKOL (PROPYL ALCOHOL, NORMAL)
- **Tunnel restriction code** D/E
- **Label** 3
14.2 Transport IMDG

Class: 3
Packing group: III
UN number: UN1274
Proper shipping name: PROPA NOL (PROPYL ALCOHOL, NORMAL)
EmS: F-E+S-D
Label: 3

14.3 Transport ICAO-TI / IATA

Class: 3
Packing group: III
UN number: UN1274
Proper shipping name: n-Propanol (Propyl alcohol, normal)
Label: 3

14.4 Other information
No data available.

14.5 Environmental hazards
Information on environmental hazards, if relevant, pls. see 14.1 - 14.3.

14.6 Special precautions for user
No data available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

SECTION 15: Regulatory information

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

EU regulations

Restriction of occupation
Adhere to the national sanitary and occupational safety regulations when using this product.

Remarks Annex I, part 2, category 6

15.2 Chemical safety assessment
No data available.

SECTION 16: Other information

Sources of key data used to compile the data sheet:
National Threshold Limit Values of the corresponding countries as amended in each case.
Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.
The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Full text of the R-, H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)
R11 Highly flammable.

Department issuing safety data sheet
UMCO Umwelt Consult GmbH - D-21107 Hamburg, Georg-Wilhelm-Strasse 183, Tel.: +49(40)79 02 36 300, Fax: +49(40)79 02 36 357, e-mail: umco@umco.de

This information is based on our present state of knowledge and experience.
The security data sheet describes products with a view to the security requirements.
However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.