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

1.1. Product identifier
primoglaze

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture
dental use

1.3. Details of the supplier of the safety data sheet
Company name: primotec - Joachim Mosch e.K
Street: Tannenwaldallee 4
Place: D-61348 Bad Homburg
Telephone: +49 (0)6172-997700-0
Telefax: +49 (0)6172-997700-99
e-mail: primotec@primogroup.de
Internet: www.primogroup.de
Responsible Department: F&E
Telefax: +49 (0)6172-997700-99

1.4. Emergency telephone number:
Giftinformationszentrum Universitätsklinikum Mainz
Telefon: +49 (0)6131-19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification according to Directive 67/548/EEC or 1999/45/EC
Indications of danger: F - Highly flammable, Xi - Irritant
R phrases:
Highly flammable.
Irritating to respiratory system and skin.
Risk of serious damage to eyes.
May cause sensitisation by skin contact.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hazard categories:
Flammable liquid: Flam. Liq. 2
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Dam. 1
Respiratory/skin sensitization: Skin Sens. 1
Specific target organ toxicity - single exposure: STOT SE 3
Hazardous to the aquatic environment: Aquatic Chronic 3
Hazard Statements:
Highly flammable liquid and vapour.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause respiratory irritation.
Harmful to aquatic life with long lasting effects.

2.2. Label elements
Hazardous components which must be listed on the label
methyl methacrylate
2-Propenoic acid, reaction products with pentaerythritol
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide
Safety Data Sheet

according to Regulation (EC) No 1907/2006

primoglaze

Product code: 1370130
Print date: 20.03.2015
Page 2 of 10

Signal word: Danger

Pictograms: GHS02-GHS05-GHS07

Hazard statements

H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P350 IF ON SKIN: Gently wash with plenty of soap and water.
P501 Dispose of contents/container in accordance with local regulation.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization
Mixture of acrylic resins and initiators.
Hazardous components

<table>
<thead>
<tr>
<th>EC No</th>
<th>Chemical name</th>
<th>CAS No</th>
<th>Classification according to Directive 67/548/EEC</th>
<th>Index No</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
<th>REACH No</th>
<th>Classification according to Regulation (EC) No. 1907/2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>201-297-1</td>
<td>methyl methacrylate</td>
<td>40 - 70 %</td>
<td>F - Highly flammable, Xi - Irritant R11-37/38-43</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80-62-6</td>
<td>acrylate monomer</td>
<td>30 - 50 %</td>
<td>Xi - Irritant R36/38</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>607-035-00-6</td>
<td>acrylic resin</td>
<td></td>
<td>F1 - Flammable, X1 - Irritant R11-37/38-43, S1 - Skin Sens. R225 H315 H317 H335</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>629-850-6</td>
<td>2-Propenoic acid, reaction products with pentaerythritol</td>
<td>&lt; 20 %</td>
<td>Xn - Harmful, Xi - Irritant, N - Dangerous for the environment R22-38-41-43-51-53</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1245638-61-2</td>
<td>2-Methyl-2,4-pentanedione, reaction products with pentaerythritol</td>
<td>&lt; 3 %</td>
<td>Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 2; H302 H315 H318 H317 H411</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>278-355-8</td>
<td>Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide</td>
<td></td>
<td>Repr. Cat. 3, N - Dangerous for the environment R62-43-51-53</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75980-60-8</td>
<td>Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide</td>
<td></td>
<td>Repr. Cat. 3, N - Dangerous for the environment R62-43-51-53</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>015-203-00-X</td>
<td>Diisocyanate, reaction products with pentaerythritol</td>
<td></td>
<td>Repr. Cat. 3, N - Dangerous for the environment R62-43-51-53</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Full text of R-, H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its vapours. Take off all contaminated clothing immediately.

After inhalation
Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

After contact with skin
After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

After contact with eyes
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion
If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. Rinse mouth immediately and drink plenty of water.

4.2. Most important symptoms and effects, both acute and delayed
No information available.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Carbon dioxide (CO2), Foam, Extinguishing powder.
Unsuitable extinguishing media
Water, Full water jet

5.2. Special hazards arising from the substance or mixture
Flammable. Vapours can form explosive mixtures with air. In case of fire may be liberated: Hazardous decomposition products

5.3. Advice for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information
Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions
Do not allow uncontrolled discharge of product into the environment.

6.3. Methods and material for containment and cleaning up
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Advice on safe handling
Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion
Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Advice on storage compatibility
Do not store together with: Oxidising agent.

Further information on storage conditions
Protect from the action of light. Keep only in the original container at a temperature between 4 -25 °C. Can polymerize with intense heat release.

7.3. Specific end use(s)
Dental use

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Exposure limits (EH40)

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>ppm</th>
<th>mg/m³</th>
<th>fibres/ml</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-62-6</td>
<td>Methyl methacrylate</td>
<td>50</td>
<td>208</td>
<td></td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>416</td>
<td></td>
<td>STEL (15 min)</td>
<td>WEL</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls
Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures
Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection
tightly fitting goggles

Hand protection
Gloves should be replaced regularly, especially after extended contact with the product. For each work-place a suitable glove type has to be selected.

Skin protection
Wear suitable protective clothing.

Respiratory protection
In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: liquid
Colour: colourless
Odour: stinging

Test method

pH-Value: not determined

Changes in the physical state

Melting point: not determined
Initial boiling point and boiling range: 100 °C
Flash point: 10 °C DIN 51755

Flammability

Solid: not applicable
Gas: not applicable

Lower explosion limits: 2,1
Upper explosion limits: 12,5
Ignition temperature: 430 °C DIN 51794

Auto-ignition temperature

Solid: not applicable
Gas: not applicable

Decomposition temperature: not determined

Water solubility: insoluble
Solubility in other solvents
not determined

Partition coefficient: not determined
Vapour density: not determined
Evaporation rate: not determined

9.2. Other information
Solid content: not determined

Product has not been tested. The statement is derived from the properties of the components.

SECTION 10: Stability and reactivity

10.1. Reactivity
Flammable, Ignition hazard.

10.2. Chemical stability
The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions
Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

10.4. Conditions to avoid
Protect from the action of light. Keep only in the original container at a temperature between 4-25 °C. Can polymerize with intense heat release.

10.5. Incompatible materials
Oxidising agent, Reducing agent, Heavy metals, Peroxide

10.6. Hazardous decomposition products
No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity
Based on available data, the classification criteria are not met.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Exposure routes</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-62-6</td>
<td>methyl methacrylate</td>
<td>oral</td>
<td>LD50 &gt; 5000 mg/kg</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50 &gt; 5000 mg/kg</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalative (4 h)</td>
<td>LC50 78 mg/l</td>
<td>RTECS</td>
<td></td>
</tr>
<tr>
<td>1245638-61-2</td>
<td>2-Propenoic acid, reaction products with pentaerythritol</td>
<td>oral</td>
<td>ATE 500 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75980-60-8</td>
<td>Diphényl(2,4,6-trimethylbenzoyl)phosphine oxide</td>
<td>oral</td>
<td>LD50 &gt; 5000 mg/kg</td>
<td>Rat</td>
<td>RTECS</td>
</tr>
</tbody>
</table>

Irritation and corrosivity
Causes skin irritation.
Causes serious eye damage.
Sensitising effects
May cause an allergic skin reaction. (methyl methacrylate), (2-Propenoic acid, reaction products with pentaerythritol), (Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide)

STOT-single exposure
May cause respiratory irritation. (methyl methacrylate)

Severe effects after repeated or prolonged exposure
Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction
Based on available data, the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.

Additional information on tests
This mixture is classified as hazardous according to 1999/45/EC.

SECTION 12: Ecological information

12.1. Toxicity
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Aquatic toxicity</th>
<th>Method</th>
<th>Dose</th>
<th>[h]</th>
<th>[d]</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-62-6</td>
<td>methyl methacrylate</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>&gt; 79 mg/l</td>
<td>96</td>
<td></td>
<td>Oncorhynchus mykiss (Rainbow trout)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50</td>
<td>69 mg/l</td>
<td>48</td>
<td></td>
<td>Daphnia magna (Big water flea)</td>
<td></td>
</tr>
<tr>
<td>75980-60-8</td>
<td>Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide</td>
<td>Acute crustacea toxicity</td>
<td>EC50</td>
<td>3,53 mg/l</td>
<td>48</td>
<td></td>
<td>Daphnia</td>
<td></td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
The product has not been tested.

12.3. Bioaccumulative potential
The product has not been tested.

12.4. Mobility in soil
The product has not been tested.

12.5. Results of PBT and vPvB assessment
The product has not been tested.

12.6. Other adverse effects
No information available.

Further information
Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Advice on disposal
Small quantities can be polymerized by light 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. Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products
**SECTION 14: Transport information**

**Land transport (ADR/RID)**

14.1. UN number: UN 1247

14.2. UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED

14.3. Transport hazard class(es): II

14.4. Packing group: 3

Hazard label: 3

Classification code: F1

Limited quantity: 1 L

Transport category: 2

Hazard No: 339

Tunnel restriction code: D/E

**Other applicable information (land transport)**

E2

**Inland waterways transport (ADN)**

14.1. UN number: UN 1247

14.2. UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED

14.3. Transport hazard class(es): II

14.4. Packing group: 3

Hazard label: 3

Classification code: F1

Limited quantity: 1 L

**Other applicable information (inland waterways transport)**

E2

**Marine transport (IMDG)**

14.1. UN number: UN 1247

14.2. UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED

14.3. Transport hazard class(es): II

14.4. Packing group: 3

Hazard label: 3

Special Provisions: -

Limited quantity: 1 L

EmS: F-E, S-D

**Other applicable information (marine transport)**

E2

**Air transport (ICAO)**

14.1. UN number: UN 1247

14.2. UN proper shipping name: METHYL METHACRYLATE MONOMER, STABILIZED

14.3. Transport hazard class(es): II

Contaminated packaging:

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

070208 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other still bottoms and reaction residues

Classified as hazardous waste.
14.4. Packing group:  II
Hazard label: 3
Limited quantity Passenger: 1 L
IATA-packing instructions - Passenger: 353
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 364
IATA-max. quantity - Cargo: 60 L

Other applicable information (air transport)
Passenger-LQ: Y341
E2

14.6. Special precautions for user
No information available.

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

SECTION 15: Regulatory information

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

EU regulatory information

Additional information

National regulatory information
Water contaminating class (D): 2 - water contaminating

15.2. Chemical safety assessment
Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

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 Harmonized 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
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Relevant R-phrases (Number and full text)
11 Highly flammable.
22 Harmful if swallowed.
36/38 Irritating to eyes and skin.
37/38 Irritating to respiratory system and skin.
38 Irritating to skin.
41 Risk of serious damage to eyes.
43 May cause sensitisation by skin contact.
51 Toxic to aquatic organisms.
53 May cause long-term adverse effects in the aquatic environment.
62 Possible risk of impaired fertility.
<table>
<thead>
<tr>
<th>Relevant H- and EUH-phrases (Number and full text)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H225</td>
</tr>
<tr>
<td>H302</td>
</tr>
<tr>
<td>H315</td>
</tr>
<tr>
<td>H317</td>
</tr>
<tr>
<td>H318</td>
</tr>
<tr>
<td>H319</td>
</tr>
<tr>
<td>H335</td>
</tr>
<tr>
<td>H361</td>
</tr>
<tr>
<td>H411</td>
</tr>
<tr>
<td>H412</td>
</tr>
</tbody>
</table>

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)