SAFETY DATA SHEET

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

1.1. Product identifier
Trade name or designation of the mixture: Hylobond 5101 Adhesive
Registration number: -
Synonyms: None.
SDS number: 32
Issue date: 23-September-2015
Version number: 03
Revision date: 18-February-2019
Supersedes date: 23-August-2018

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Structural adhesive.
Uses advised against: Use in accordance with supplier's recommendations.

1.3. Details of the supplier of the safety data sheet
Manufacturer: Hylomar Ltd.
Address: Hylo House, Cale Lane, New Springs, Wigan, Greater Manchester, UK, WN2 1JT
Telephone number: +44(0)1942 617000
E-mail address: info@hylomar.co.uk
Contact person: Technical Department

1.4. Emergency telephone number
Access code: 333544

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards
- Flammable liquids
  Category 2
- H225 - Highly flammable liquid and vapour.

Health hazards
- Skin corrosion/irritation
  Category 1A
- H314 - Causes severe skin burns and eye damage.
- Serious eye damage/eye irritation
  Category 1
- H318 - Causes serious eye damage.
- Skin sensitisation
  Category 1
- H317 - May cause an allergic skin reaction.
- Specific target organ toxicity - single exposure
  Category 3 respiratory tract irritation
- H335 - May cause respiratory irritation.

Environmental hazards
- Hazardous to the aquatic environment, long-term aquatic hazard
  Category 2
- H411 - Toxic to aquatic life with long lasting effects.

Hazard summary: May be ignited by heat, sparks or flames. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause irritation to the respiratory system. Dangerous for the environment if discharged into watercourses.

2.2. Label elements
Label according to Regulation (EC) No. 1272/2008 as amended
Contains:
- Dibenzoyl peroxide, Dibutyl maleate, Methacrylic acid, Methyl methacrylate, Propylidynetrimethanol, ethoxylated, esters with acrylic acid, Rosin
Hazard pictograms

Signal word

Danger

Hazard statements

H411 Toxic to aquatic life with long lasting effects.
H225 Highly flammable liquid and vapour.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H318 Causes serious eye damage.

Precautionary statements

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P260 Do not breathe vapour.
P273 Avoid release to the environment.

Response

P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Storage

None.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information

None.

2.3. Other hazards

This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>%</th>
<th>CAS-No. / EC No.</th>
<th>REACH Registration No.</th>
<th>Index No.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate</td>
<td>25 - 50</td>
<td>80-62-6/201-297-1</td>
<td>01-2119452498-28-XXXX</td>
<td>607-035-00-6</td>
<td>#</td>
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<td>Classification: Flammable Liquid 2; H225, Skin Irritant 2; H315, Skin Sensitivity 1; H317, STOT SE 3; H335</td>
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<tr>
<td>Methacrylic acid</td>
<td>&lt;= 10</td>
<td>79-41-4/201-204-4</td>
<td>01-2119463884-26-XXXX</td>
<td>607-088-00-5</td>
<td>D</td>
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<tr>
<td>Classification: Acute Toxicity 4; H302, Acute Toxicity 3; H311, Skin Corrosivity 1A; H314, Eye Damaging 1; H318, Acute Toxicity 4; H332, STOT SE 3; H335</td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Dipropylene glycol dibenzolate</td>
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<td>27138-31-4/248-258-5</td>
<td>01-2119529241-49-XXXX</td>
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<tr>
<td>Classification: Aquatic Chronicity 3; H412</td>
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<tr>
<td>Hexan-6-olide</td>
<td>&lt;= 3</td>
<td>502-44-3/207-938-1</td>
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<td>-</td>
<td>-</td>
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<td>Classification: Eye Irritation 2; H319</td>
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<td></td>
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<tr>
<td>Dibenzoyl peroxide</td>
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<td>94-36-0/202-327-6</td>
<td>01-2119511472-50-XXXX</td>
<td>617-008-00-0</td>
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<td>Classification: Organic Peroxide 3; H241, Skin Sensitivity 1; H317, Eye Irritation 2; H319, Aquatic Acute 1; H400(M=10), Aquatic Chronicity 1; H410(M=10)</td>
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<tr>
<td>Dibutyl maleate</td>
<td>&lt; 1</td>
<td>105-76-0/203-328-4</td>
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<td>-</td>
<td>-</td>
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<tr>
<td>Classification: Skin Sensitivity 1; H317, STOT RE 2; H373, Aquatic Acute 1; H400</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propylidynamic methanol, ethoxylated, esters with acrylic acid</td>
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<td>28961-43-5/500-066-5</td>
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<td>-</td>
<td>-</td>
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<td>Classification: Skin Sensitivity 1; H317, Eye Irritation 2; H319</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rosin</td>
<td>&lt; 1</td>
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<td>650-015-00-7</td>
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<tr>
<td>Classification: Skin Sensitivity 1; H317</td>
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<td></td>
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<td></td>
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</tr>
</tbody>
</table>

Hylobond 5101 Adhesive

930221 Version #: 03 Revision date: 18-February-2019 Issue date: 23-September-2015

SDS UK 2 / 12
### Classification:
Aquatic Acute 1;H400, Aquatic Chronic 1;H410

### List of abbreviations and symbols that may be used above

**#**: This substance has been assigned Union workplace exposure limit(s).

**Note D**: Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Part 3. However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the supplier must state on the label the name of the substance followed by the words "non-stabilised".

### Composition comments
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Components not listed are either non-hazardous or are below reportable limits. The full text for all H-statements is displayed in section 16.

### SECTION 4: First aid measures

#### General information
Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

#### 4.1. Description of first aid measures

**Inhalation**
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison centre or doctor/physician if you feel unwell.

**Skin contact**
Remove contaminated clothing immediately and wash skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**Eye contact**
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control centre immediately.

**Ingestion**
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Sensitisation.

#### 4.2. Most important symptoms and effects, both acute and delayed
Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

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

### SECTION 5: Firefighting measures

#### General fire hazards
Highly flammable liquid and vapour.

#### 5.1. Extinguishing media

**Suitable extinguishing media**
Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

#### 5.2. Special hazards arising from the substance or mixture
Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

#### 5.3. Advice for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Special protective equipment for firefighters**
In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

**Special fire fighting procedures**
Use standard firefighting procedures and consider the hazards of other involved materials.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures
Ventilate closed spaces before entering them. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Do not breathe vapour. Avoid contact with eyes, skin, and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear appropriate protective equipment and clothing during clean-up. Local authorities should be advised if significant spillages cannot be contained.

**For non-emergency personnel**

**For emergency responders**
Wear appropriate protective equipment and clothing during clean-up. Use personal protection recommended in Section 8 of the SDS.

#### 6.2. Environmental precautions
Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Diike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Clean surface thoroughly to remove residual contamination.

6.4. Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist/vapours. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices. Persons susceptible to allergic reactions should not handle this product.

7.2. Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store in tightly closed container. Store away from incompatible materials (see section 10 of the SDS).

7.3. Specific end use(s)

Structural adhesive.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>UK. EH40 Workplace Exposure Limits (WELs)</th>
<th>Component</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dibenzoyl peroxide (CAS 94-36-0)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methacrylic acid (CAS 79-41-4)</td>
<td>STEL</td>
<td>143 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>40 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>72 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methyl methacrylate (CAS 80-62-6)</td>
<td>STEL</td>
<td>416 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>208 mg/m3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rosin (CAS 8050-09-7)</td>
<td>STEL</td>
<td>0.15 mg/m3 Fume.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.05 mg/m3 Fume.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate (CAS 80-62-6)</td>
<td>STEL</td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>50 ppm</td>
<td></td>
</tr>
</tbody>
</table>

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no effect levels (DNELs)

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
<th>Assessment factor</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dibenzoyl peroxide (CAS 94-36-0)</td>
<td>Long-term, Systemic, Oral</td>
<td>2 mg/kg bw/day</td>
<td>100</td>
</tr>
</tbody>
</table>
### Workers

<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
<th>Assessment factor</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dibenzoyl peroxide (CAS 94-36-0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term, Local, Dermal</td>
<td>34 µg/cm2</td>
<td>5</td>
<td>Skin irritation/corrosion</td>
</tr>
<tr>
<td>Long-term, Systemic, Dermal</td>
<td>13.3 mg/kg bw/day</td>
<td>87.5</td>
<td>Repeated dose toxicity</td>
</tr>
<tr>
<td>Long-term, Systemic, Inhalation</td>
<td>39 mg/m3</td>
<td>12.5</td>
<td>Repeated dose toxicity</td>
</tr>
<tr>
<td>Dipropylene glycol dibenzoate (CAS 27138-31-4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term, Systemic, Dermal</td>
<td>10 mg/kg bw/day</td>
<td>100</td>
<td>Repeated dose toxicity</td>
</tr>
<tr>
<td>Long-term, Systemic, Inhalation</td>
<td>8.8 mg/m3</td>
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<tr>
<td>Methacrylic acid (CAS 79-41-4)</td>
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<td></td>
<td></td>
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<tr>
<td>Long-term, Local, Inhalation</td>
<td>88 mg/m3</td>
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<tr>
<td>Long-term, Systemic, Dermal</td>
<td>4.25 mg/kg bw/day</td>
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</tr>
<tr>
<td>Long-term, Systemic, Inhalation</td>
<td>29.6 mg/m3</td>
<td>11.9</td>
<td>respiratory tract irritation</td>
</tr>
<tr>
<td>Methyl methacrylate (CAS 80-62-6)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Long-term, Systemic, Dermal</td>
<td>13.67 mg/kg bw/day</td>
<td>12</td>
<td>Repeated dose toxicity</td>
</tr>
<tr>
<td>Long-term, Systemic, Inhalation</td>
<td>208 mg/m3</td>
<td>1</td>
<td>Repeated dose toxicity</td>
</tr>
<tr>
<td>Short-term, Local, Dermal</td>
<td>1.5 mg/cm2</td>
<td>10</td>
<td>Skin sensitisation</td>
</tr>
<tr>
<td>Short-term, Local, Inhalation</td>
<td>208 mg/m3</td>
<td>1</td>
<td>Repeated dose toxicity</td>
</tr>
<tr>
<td>trizinc bis(orthophosphate) (CAS 7779-90-0)</td>
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<td></td>
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</tr>
<tr>
<td>Long-term, Systemic, Dermal</td>
<td>83 mg/kg bw/day</td>
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<td>Repeated dose toxicity</td>
</tr>
<tr>
<td>Long-term, Systemic, Inhalation</td>
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<td>Repeated dose toxicity</td>
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<td>Long-term, Systemic, Oral</td>
<td>0.83 mg/kg bw/day</td>
<td>1</td>
<td>Repeated dose toxicity</td>
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</table>

### Predicted no effect concentrations (PNECs)

<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
<th>Assessment factor</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dibenzoyl peroxide (CAS 94-36-0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshwater</td>
<td>0.02 µg/l</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Marine water</td>
<td>0.002 µg/l</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Sediment (freshwater)</td>
<td>0.013 mg/kg</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Sediment (marine water)</td>
<td>0.001 mg/kg</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Soil</td>
<td>0.003 mg/kg</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>STP</td>
<td>0.35 mg/l</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Dipropylene glycol dibenzoate (CAS 27138-31-4)</td>
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<tr>
<td>Freshwater</td>
<td>3.7 µg/l</td>
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<tr>
<td>Marine water</td>
<td>0.37 µg/l</td>
<td>10000</td>
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<tr>
<td>Secondary poisoning</td>
<td>333 mg/kg</td>
<td>30</td>
<td>Oral</td>
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<tr>
<td>Sediment (freshwater)</td>
<td>1.49 mg/kg</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Sediment (marine water)</td>
<td>0.149 mg/kg</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Soil</td>
<td>1 mg/kg</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>STP</td>
<td>10 mg/l</td>
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<tr>
<td>Methacrylic acid (CAS 79-41-4)</td>
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<tr>
<td>Freshwater</td>
<td>0.82 mg/l</td>
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<tr>
<td>Intermittent releases</td>
<td>0.82 mg/l</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Marine water</td>
<td>0.82 mg/l</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Soil</td>
<td>1.2 mg/kg</td>
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</tr>
<tr>
<td>STP</td>
<td>10 mg/l</td>
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</table>
Methyl methacrylate (CAS 80-62-6)

<table>
<thead>
<tr>
<th>Environment</th>
<th>Concentration</th>
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<tbody>
<tr>
<td>Freshwater</td>
<td>0.94 mg/l</td>
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<tr>
<td>Intermittent releases</td>
<td>0.94 mg/l</td>
</tr>
<tr>
<td>Marine water</td>
<td>0.94 mg/l</td>
</tr>
<tr>
<td>Sediment (freshwater)</td>
<td>5.74 mg/kg</td>
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<tr>
<td>Soil</td>
<td>1.47 mg/kg</td>
</tr>
<tr>
<td>STP</td>
<td>10 mg/l</td>
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trizinc bis(orthophosphate) (CAS 7779-90-0)

<table>
<thead>
<tr>
<th>Environment</th>
<th>Concentration</th>
</tr>
</thead>
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<tr>
<td>Freshwater</td>
<td>20.6 µg/l</td>
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<tr>
<td>Marine water</td>
<td>6.1 µg/l</td>
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<tr>
<td>Sediment (freshwater)</td>
<td>117.8 mg/kg</td>
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<tr>
<td>Sediment (marine water)</td>
<td>56.5 mg/kg</td>
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<tr>
<td>Soil</td>
<td>35.6 mg/kg</td>
</tr>
<tr>
<td>STP</td>
<td>100 µg/l</td>
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</tbody>
</table>

8.2. Exposure controls

**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

**Individual protection measures, such as personal protective equipment**

**General information**

Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Eye/face protection**

Wear safety glasses with side shields (or goggles) and a face shield. Eye protection should meet standard EN 166.

**Skin protection**

- **Hand protection**
  
  Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Wear suitable gloves tested to EN374.

- **Other**
  
  Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection**

Chemical respirator with organic vapour cartridge and full facepiece.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**Hygiene measures**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

**Appearance**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>White</td>
</tr>
<tr>
<td>Odour</td>
<td>Strong. Acrylic.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>12.0 °C (53.6 °F) Closed cup</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

**Upper/lower flammability or explosive limits**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
Flammability limit - upper (%): Not available.

Vapour pressure: Not available.

Vapour density: Not available.

Relative density: 0.96 - 1.02

Solubility(ies): Insoluble in water.

Partition coefficient (n-octanol/water): Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: > 0.4 cm²/s Kinematic.

Viscosity temperature: 20 °C (68 °F)

Explosive properties: Not explosive.

Oxidising properties: Not oxidising.

9.2. Other information: No relevant additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability: Material is stable under normal conditions.

10.3. Possibility of hazardous reactions: Hazardous polymerization may occur.

10.4. Conditions to avoid: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials. Protect against direct sunlight.


10.6. Hazardous decomposition products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological information

General information: Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure:

- **Inhalation**: May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
- **Skin contact**: Causes severe skin burns. May cause an allergic skin reaction.
- **Eye contact**: Causes serious eye damage.
- **Ingestion**: May cause discomfort if swallowed.

Symptoms: Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Sensitisation. Permanent eye damage including blindness could result. May cause respiratory irritation.

11.1. Information on toxicological effects

**Acute toxicity**: Not expected to be acutely toxic.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Methacrylic acid (CAS 79-41-4)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>500 - 1000 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td>Rat</td>
<td>7.1 mg/l, 4 Hours</td>
</tr>
<tr>
<td>LC50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>1320 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Methyl methacrylate (CAS 80-62-6)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>&gt; 5000 mg/kg, 24 Hours</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td>Rat</td>
<td>29.8 mg/l, 4 Hours</td>
</tr>
<tr>
<td>Vapour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Components | Species | Test Results
--- | --- | ---
Propyldimethanol, ethoxylated, esters with acrylic acid (CAS 28961-43-5)  
**Acute**  
**Dermal**  
LD50 Rabbit > 13200 mg/kg  
**Oral**  
LD50 Rat > 2000 mg/kg  
Rosin (CAS 8050-09-7)  
**Acute**  
**Dermal**  
LD50 Rat > 2000 mg/kg, 24 Hours  
**Oral**  
LD50 Rat > 2000 mg/kg

Skin corrosion/irritation  
Causes severe skin burns.

Serious eye damage/eye irritation  
Causes serious eye damage.

Respiratory sensitisation  
Due to partial or complete lack of data the classification is not possible.

Skin sensitisation  
May cause an allergic skin reaction.

Germ cell mutagenicity  
Due to partial or complete lack of data the classification is not possible.

Carcinogenicity  
Due to partial or complete lack of data the classification is not possible.

IARC Monographs. Overall Evaluation of Carcinogenicity  
Dibenzoyl peroxide (CAS 94-36-0) 3 Not classifiable as to carcinogenicity to humans.  
Methyl methacrylate (CAS 80-62-6) 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity  
Due to partial or complete lack of data the classification is not possible.

Specific target organ toxicity - single exposure  
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure  
Due to partial or complete lack of data the classification is not possible.

Aspiration hazard  
Due to the physical form of the product it is not an aspiration hazard.

Mixture versus substance information  
The product is a mixture.

Other information  
No other specific acute or chronic health impact noted.

**SECTION 12: Ecological information**

12.1. Toxicity  
Toxic to aquatic life with long lasting effects.

Components | Species | Test Results
--- | --- | ---
Dibenzoyl peroxide (CAS 94-36-0)  
**Aquatic**  
**Acute**  
Algae LC50 Pseudokirchnerella subcapitata 0.0711 mg/l, 72 hours  
Fish EC50 Oncorhynchus mykiss 0.0602 mg/l, 96 hours  
Methacrylic acid (CAS 79-41-4)  
**Aquatic**  
**Acute**  
Algae EbC50 Pseudokirchnerella subcapitata 20 mg/l, 72 hours  
**Chronic**  
Algae NOEC Pseudokirchnerella subcapitata 8.2 mg/l, 72 hours  
Methyl methacrylate (CAS 80-62-6)  
**Aquatic**  
**Acute**  
Crustacea EC50 Daphnia magna 69 mg/l, 48 hours  
**Chronic**  
Fish NOEC Zebrafish 9.4 mg/l, 35 days
Components Test Results

Species

Propylidynetrimethanol, ethoxylated, esters with acrylic acid (CAS 28961-43-5)

Aquatic

Acute
Fish LC50 Fish 1.95 mg/l, 96 hours

Chronic
Algae EC50 Desmodesmus subspicatus 2.2 mg/l, 72 hours

Rosin (CAS 8050-09-7)

Aquatic

Acute
Crustacea EC50 Daphnia magna 1.6 mg/l

12.2. Persistence and degradability

No data is available on the degradability of this product.

12.3. Bioaccumulative potential

Partition coefficient

n-octanol/water (log Kow)

- Dibenzoyl peroxide (CAS 94-36-0) 3.46
- Hexan-6-olide (CAS 502-44-3) 1.215
- Methacrylic acid (CAS 79-41-4) 0.93
- Methyl methacrylate (CAS 80-62-6) 1.38

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil

The product is insoluble in water.

12.5. Results of PBT and vPvB assessment

This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

EU waste code 08 04 09* The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number UN1133
14.2. UN proper shipping name ADHESIVES containing flammable liquid

14.3. Transport hazard class(es)

Class 3
Subsidiary risk -
Label(s) 3
Hazard No. (ADR) 30
Tunnel restriction code D/E

14.4. Packing group III

14.5. Environmental hazards Yes

14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

RID

14.1. UN number UN1133
14.2. UN proper shipping name ADHESIVES containing flammable liquid
14.3. Transport hazard class(es)
   Class  3
   Subsidiary risk -
   Label(s)  3

14.4. Packing group  III

14.5. Environmental hazards  Yes

14.6. Special precautions for user
   Read safety instructions, SDS and emergency procedures before handling.

---

ADN

14.1. UN number  UN1133
14.2. UN proper shipping name  ADHESIVES containing flammable liquid

---

IATA

14.1. UN number  UN1133
14.2. UN proper shipping name  Adhesives containing flammable liquid

---

IMDG

14.1. UN number  UN1133
14.2. UN proper shipping name  ADHESIVES containing flammable liquid

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

---

SECTION 15: Regulatory information

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

EU regulations

   Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended
      Not listed.
      Not listed.
   Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
      Not listed.
   Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
      Not listed.
   Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
      Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended
Not listed.

trizinc bis(orthophosphate) (CAS 7779-90-0)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
Not listed.

**Authorisations**

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended
Not listed.

**Restrictions on use**

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
Methyl methacrylate (CAS 80-62-6)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.
Not listed.

**Other EU regulations**

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended
Not listed.

**Other regulations**

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

Directive 2012/18/EU on major accident hazards involving dangerous substances: P5

National regulations

Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended.

**15.2. Chemical safety assessment**

**SECTION 16: Other information**

**List of abbreviations**

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road.
EC50: Effective Concentration, 50%.
IATA: International Air Transport Association.
LC50: Lethal Concentration, 50%.
LD50: Lethal Dose, 50%.
NOEC: No observed effect concentration.
PBT: Persistent, bioaccumulative and toxic.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
STEL: Short-Term Exposure Limit.
STP: Sewage treatment plant.
TWA: Time Weighted Average Value.
vPvB: Very Persistent and very Bioaccumulative.

**References**

HSD® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity

**Information on evaluation method leading to the classification of mixture**

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. The mixture is classified based on test data for physical hazards. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. For details, refer to Sections 9, 11 and 12.

**Full text of any H-statements not written out in full under Sections 2 to 15**

H225 Highly flammable liquid and vapour.
H241 Heating may cause a fire or explosion.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
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.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure by ingestion.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

This SDS contains revisions in the following section(s):
1, 2, 3, 8, 9, 11, 16.

Training information
Follow training instructions when handling this material.

Disclaimer
The information in the sheet was written based on the best knowledge and experience currently available.