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: Hylogrip HY6138, Hylogrip HY6148
Registration number: -
Synonyms: None.
SDS number: 8
Issue date: 01-March-2017
Version number: 01
Revision date: -
Supersedes date: -

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Anaerobic Retainers.
Uses advised against: None known.

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

Health hazards
- Skin corrosion/irritation: Category 2, H315 - Causes skin irritation.
- Serious eye damage/eye irritation: Category 2, H319 - Causes serious eye irritation.
- Skin sensitisation: Category 1, H317 - May cause an allergic skin reaction.

Hazard summary
Irritating to eyes and skin. May cause an allergic skin reaction.

2.2. Label elements

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

Contains:
(1-Methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate, 2-Hydroxyethyl methacrylate

Hazard pictograms

Signal word: Warning

Hazard statements
- H319 Causes serious eye irritation.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
Precautionary statements

Prevention
P261 Avoid breathing vapours.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response
P205 + P232 + P242 + P251 + P351 + P338
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P333 + P313 If eye irritation persists: Get medical advice/attention.

Storage
Store away from incompatible materials.

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

Supplemental label information
None.

2.3. Other hazards
Not a PBT or vPvB substance or mixture.

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>(1-Methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate</td>
<td>60 - 90</td>
<td>24448-20-2</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>246-263-7</td>
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<tr>
<td>Classification:</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Skin Sens. 1; H317</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-Hydroxyethyl methacrylate</td>
<td>10 - &lt;20</td>
<td>868-77-9</td>
<td>-</td>
<td>607-124-00-X</td>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td>Classification:</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Skin Irrit. 2; H315, Skin Sens. 1; H317, Eye Irrit. 2; H319</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>D</td>
</tr>
<tr>
<td>Cumene hydroperoxide</td>
<td>&lt;1</td>
<td>80-15-9</td>
<td>-</td>
<td>617-002-00-8</td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Classification:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Org. Perox. E; H242, Acute Tox. 4; H302, Acute Tox. 4; H312, Skin Corr. 1B; H314, Acute Tox. 3; H331, STOT RE 2; H373, Aquatic Chronic 2; H411</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

List of abbreviations and symbols that may be used above

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. The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information
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
Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact
Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. 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. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

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

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards
No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Do not use water jet as an extinguisher, as this will spread the fire.

During fire, gases hazardous to health may be formed.

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Move containers from fire area if you can do so without risk.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Avoid contact with skin and eyes. Avoid inhalation of vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. In case of spills, beware of slippery floors and surfaces.

For emergency responders
Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up.

6.2. Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up
Eliminate all ignition sources. Ventilate the area.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste for proper disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use.

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
Use with adequate ventilation. Avoid contact with skin and eyes. Avoid breathing vapour. Persons susceptible for allergic reactions should not handle this product. Wear protective clothing as described in Section 8 of this safety data sheet. Wash thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities
Keep away from heat, spark, open flames and other sources of ignition. Keep container tightly closed in a cool, well-ventilated place. Store away from incompatible materials.

7.3. Specific end use(s)
Anaerobic Retainers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
UK. EH40 Workplace Exposure Limits (WELs)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon dioxide, crystalline silica-free (CAS 7631-86-9)</td>
<td>TWA</td>
<td>6 mg/m3</td>
<td>Inhalable dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4 mg/m3</td>
<td>Respirable dust.</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)
Not available.

Predicted no effect concentrations (PNECs)
Not available.

8.2. Exposure controls

Appropriate engineering controls
Provide adequate ventilation. Observe occupational exposure limits and minimise the risk of exposure. Provide easy access to water supply and eye wash facilities.

Individual protection measures, such as personal protective equipment
General information
Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Wear approved safety glasses or goggles.

Eye/face protection

Skin protection
- Hand protection
  Wear protective gloves. Nitrile or neoprene gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.
- Other
  Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection
  In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment with combination filter (type A2/P2).

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.

Environmental exposure controls
  Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

**Appearance**
- Physical state: Liquid.
- Form: Liquid.
- Colour: Green.
- Odour: Ester-like.
- Odour threshold: Not available.
- pH: Not available.
- Melting point/freezing point: Not available.
- Initial boiling point and boiling range: Not available.
- Flash point: 102.0 °C (215.6 °F)
- Evaporation rate: Not available.
- Flammability (solid, gas): Not applicable.

**Upper/lower flammability or explosive limits**
- Flammability limit - lower (%): Not available.
- Flammability limit - upper (%): Not available.

- Vapour pressure: > 0.1 kPa (25 °C)
- Vapour density: > 1 (Air = 1)
- Relative density: 1.1 (25 °C)
- Solubility(ies): Slightly soluble in water.
- Partition coefficient (n-octanol/water): Not available.
- Auto-ignition temperature: Not available.
- Decomposition temperature: Not available.
- Viscosity: HY6138: >4500 mPas, HY6148: 600 mPas (25°C)

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
  No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid
  Contact with incompatible materials.

10.5. Incompatible materials

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
In high concentrations, vapours may irritate throat and respiratory system and cause coughing.

Skin contact
Causes skin irritation. May cause an allergic skin reaction.

Eye contact
Causes serious eye irritation.

Ingestion
May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms
Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

11.1. Information on toxicological effects

Acute toxicity
Not expected to be acutely toxic.

Components | Species | Test results
--- | --- | ---
2-Hydroxyethyl methacrylate (CAS 868-77-9) | | |
**Acute** | | |
Dermal | Rabbit | > 3000 mg/kg
Oral | Rat | > 4000 mg/kg

Cumene hydroperoxide (CAS 80-15-9) | | |
**Acute** | | |
Dermal | Rat | 500 mg/kg
Inhalation | Rat | 220 ppm, 4 hours
Oral | Rat | 800 mg/kg

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory sensitisation
Based on available data, the classification criteria are not met.

Skin sensitisation
May cause an allergic skin reaction.

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

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

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

Specific target organ toxicity - single exposure
Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure
Based on available data, the classification criteria are not met.

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

Mixture versus substance information
No information available.

Other information
Symptoms may be delayed.

SECTION 12: Ecological information

12.1. Toxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components | Species | Test results
--- | --- | ---
Cumene hydroperoxide (CAS 80-15-9) | | |
**Aquatic** | | |
Crustacea | EC50 | Daphnia | 7 mg/l, 24 hours
Fish | LC50 | Fish | 3.9 mg/l, 96 hours

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)

2-Hydroxyethyl methacrylate (CAS 868-77-9) 0.47

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil

The product is slightly soluble in water. Expected to be slightly to moderately mobile in soil.

12.5. Results of PBT and vPvB assessment

Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

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
Empty containers should be taken to an approved waste handling site for recycling or disposal.

EU waste code
16 03 05*
The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information
Do not discharge into drains, water courses or onto the ground. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Special precautions
Dispose of in accordance with local regulations.

SECTION 14: Transport information

ADR
14.1. - 14.6.: Not regulated as dangerous goods.

RID
14.1. - 14.6.: Not regulated as dangerous goods.

ADN
14.1. - 14.6.: Not regulated as dangerous goods.

IATA
14.1. - 14.6.: Not regulated as dangerous goods.

IMDG
14.1. - 14.6.: Not regulated as dangerous goods.

14.7. Transport in bulk
According to Annex II of Marpol 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 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.
  Not listed.
- 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 authorisation, 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
Not listed.

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
Cumene hydroperoxide (CAS 80-15-9)
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.

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.

National regulations
Young people under 18 years old are not allowed to work with this product according to the EU Directive 94/33/EC on the protection of young people at work. Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment
No Chemical Safety Assessment has been carried out.

SECTION 16: Other information
List of abbreviations
PBT: Persistent, bioaccumulative and toxic.
vPvB: Very Persistent and very Bioaccumulative.

References
HSDB® - Hazardous Substances Data Bank
Registry of Toxic Effects of Chemical Substances (RTECS)
ESIS (European chemical Substances Information System)

Information on evaluation method leading to the classification of mixture
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
H242 Heating may cause a fire.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

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.