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 HY6138/6640, Hylogrip HY6148

Registration number -

Synonyms None.

SDS number 8

Issue date 04-February-2013

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 1-760-476-3961

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 Directive 67/548/EEC or 1999/45/EC as amended

This preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification Xi;R36, R43

The full text for all R-phrases is displayed in section 16.

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

Physical hazards Not classified for physical hazards.

Health hazards Irritating to eyes. May cause sensitisation by skin contact. Occupational exposure to the substance or mixture may cause adverse health effects.

Environmental hazards Not classified for hazards to the environment.

Specific hazards Irritating to eyes and skin. May cause allergic skin reaction.

Main symptoms Irritation of eyes and mucous membranes. Exposed may experience eye tearing, redness, and discomfort. Rash. In high concentrations, vapours may be irritating to the respiratory system.

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

Precautionary statements

Prevention
P261 - Avoid breathing vapours.
P280 - Wear protective gloves and eye/face protection.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P264 - Wash thoroughly after handling.

Response
P305 + 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 eye irritation persists: Get medical advice/attention.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.

Storage Store away from incompatible materials.

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

Supplemental label information Not applicable.

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
(1-Methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl) bismethacrylate	60 - 90	24448-20-2 246-263-7	-	-	
Classification: **DSD:** R43 **CLP:** Skin Sens. 1;H317					
2-Hydroxyethyl methacrylate	10 - <20	868-77-9 212-782-2	-	607-124-00-X	
Classification: **DSD:** Xi;R36/38, R43 **CLP:** Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319					
Silicon dioxide	1-5	7631-86-9 231-545-4	-	-	
Classification: **DSD:** - **CLP:** -					
Cumene hydroperoxide	< 1	80-15-9 201-254-7	-	617-002-00-8	
Classification: **DSD:** O;R7, T;R23, C;R34, Xn;R21/22-48/20/22, N;R51/53 **CLP:** 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					

DSD: Directive 67/548/EEC.
CLP: Regulation No. 1272/2008.

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 R- and H-phrases 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.

4.1. Description of first aid measures

Inhalation	Move into fresh air and keep at rest. If not breathing, give artificial respiration or give oxygen by trained personnel. Get medical attention if any discomfort continues.
Skin contact	Take off immediately all contaminated clothing. Wash skin thoroughly with soap and water. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact	Flush eyes thoroughly with water for at least 15 minutes. Remove any contact lenses. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly. Drink a few glasses of water or milk. Get medical attention if any discomfort continues.
4.2. Most important symptoms and effects, both acute and delayed	Irritation of eyes and mucous membranes. Exposed may experience eye tearing, redness, and discomfort. Rash. In high concentrations, vapours may be irritating to the respiratory system.
4.3. Indication of any immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards	The product is not flammable. Will burn if involved in a fire.

5.1. Extinguishing media

Suitable extinguishing media	Water spray, foam, dry powder or carbon dioxide.
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	By heating and fire, toxic vapours/gases may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.
Special fire fighting procedures	Cool containers exposed to heat with water spray and remove container, if no risk is involved. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Avoid inhalation of vapours/spray and contact with skin and eyes. Wear protective clothing as described in Section 8 of this SDS.
For emergency responders	Keep unnecessary personnel away. Wear protective clothing as described in Section 8 of this safety data sheet.
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	Remove sources of ignition. Ventilate the area. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Following product recovery, flush area with water.
6.4. Reference to other sections	For personal protection, see Section 8 of the MSDS. For waste disposal, see Section 13 of the MSDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Keep away from sources of ignition - No smoking. 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. Avoid inhalation of vapours and contact with skin and eyes.
7.2. Conditions for safe storage, including any incompatibilities	Keep container tightly closed in a cool, well-ventilated place. Keep away from heat, spark, open flames and other sources of ignition. 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

Austria. MAK List

Components	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	MAK	4 mg/m3	Inhalable fraction.

Belgium. Exposure Limit Values.

Components	Type	Value
Silicon dioxide (CAS 7631-86-9)	TWA	10 mg/m3

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	10 mg/m3	Inhalable fraction.
		0,07 mg/m3	Respirable fraction.

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Type	Value
Silicon dioxide (CAS 7631-86-9)	TWA	2 mg/m3

Czech Republic. OELs. Government Decree 361

Components	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	4 mg/m3	Dust.

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	2 mg/m3	Respirable dust.

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	AGW	4 mg/m3	Inhalable fraction.

Ireland. Occupational Exposure Limits

Components	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	6 mg/m3	Total inhalable dust.
		2,4 mg/m3	Respirable dust.

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value
Cumene hydroperoxide (CAS 80-15-9)	TWA	1 mg/m3
Silicon dioxide (CAS 7631-86-9)	TWA	1 mg/m3

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements (Hygiene Norm HN 23:2007)

Components	Type	Value
2-Hydroxyethyl methacrylate (CAS 868-77-9)	TWA	20 mg/m3
Cumene hydroperoxide (CAS 80-15-9)	TWA	1 mg/m3

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value	Form
2-Hydroxyethyl methacrylate (CAS 868-77-9)	TLV	11 mg/m3	
		2 ppm	
Silicon dioxide (CAS 7631-86-9)	TLV	1,5 mg/m3	Respirable dust.

Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

Components	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	2 mg/m3	Respirable dust.
		10 mg/m3	Total dust.

Slovakia. OELs. Decree of the government of the Slovak Republic concerning protection of health in work with chemical agents

Components	Type	Value
Silicon dioxide (CAS 7631-86-9)	TWA	0,3 mg/m3

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Components	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	4 mg/m3	Inhalable fraction.

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
Silicon dioxide (CAS 7631-86-9)	TWA	6 mg/m3	Inhalable dust.
		2,4 mg/m3	Respirable dust.

Biological limit values

Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices

Components	Value	Determinant	Specimen	Sampling time
Silicon dioxide (CAS 7631-86-9)	25 %	red blood cell or total blood acetylcholinesterase activity (EC. 3.1.1.7.)	Reduction from individual baseline activity in red blood cells	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL)

Components	Type	Route	Value	Form
2-Hydroxyethyl methacrylate (CAS 868-77-9)	Workers	Dermal	1,3 mg/kg/day	Long term Systemic effects
		Inhalation	4,9 mg/m3	Long term Systemic effects
Cumene hydroperoxide (CAS 80-15-9)	Workers	Inhalation	6 mg/m3	Long term Systemic effects
Silicon dioxide (CAS 7631-86-9)	Workers	Inhalation	4 mg/m3	Long term Systemic effects

Predicted no effect concentrations (PNECs)

Components	Type	Route	Value	Form
2-Hydroxyethyl methacrylate (CAS 868-77-9)	Aqua (freshwater)	Water	0,482 mg/l	
	Aqua (intermittent releases)	Water	1 mg/l	
	Aqua (marine water)	Water	0,482 mg/l	
	Sediment (freshwater)	Not applicable	3,79 mg/kg	
	Sediment (marine water)	Not applicable	3,79 mg/kg	
	Sewage Treatment Plant	Not applicable	10 mg/l	
	Soil	Soil	0,476 mg/kg	
Cumene hydroperoxide (CAS 80-15-9)	Aqua (freshwater)	Water	0,0012 mg/l	

Components	Type	Route	Value	Form
	Aqua (intermittent releases)	Water	0,012 mg/l	
	Aqua (marine water)	Water	0,0001 mg/l	
	Sediment (freshwater)	Not applicable	0,253 mg/kg	
	Sediment (marine water)	Not applicable	0,0253 mg/kg	
	Sewage Treatment Plant	Not applicable	0,35 mg/l	
	Soil	Soil	0,056 mg/kg	

8.2. Exposure controls

Appropriate engineering controls Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours.

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.

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

- Hand protection Wear protective gloves. Viton or nitrile rubber 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 Under normal conditions, respirator is not normally required. In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment.

Thermal hazards Not applicable.

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 Green liquid.

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 °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)
Explosive properties	Not applicable.
Oxidizing properties	Not available.
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	Heat, flames and sparks.
10.5. Incompatible materials	Strong oxidising agents. Reducing Agents. Radical initiators.
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

Ingestion	Ingestion may cause irritation and malaise.
Inhalation	In high concentrations, vapours may irritate throat and respiratory system and cause coughing.
Skin contact	Causes skin irritation. May cause sensitisation by skin contact.
Eye contact	Causes serious eye irritation.
Symptoms	Irritation of eyes and mucous membranes. Exposed may experience eye tearing, redness, and discomfort. Rash. In high concentrations, vapours may be irritating to the respiratory system.

11.1. Information on toxicological effects

Acute toxicity May cause discomfort if swallowed.

Components	Species	Test results
2-Hydroxyethyl methacrylate (CAS 868-77-9)		
Acute		
Dermal		
LD50	Rabbit	>= 3000 mg/kg
Oral		
LD50	Rat	5050 mg/kg
Other		
LD50	Rabbit	> 3 g/kg
Cumene hydroperoxide (CAS 80-15-9)		
Acute		
Dermal		
LD50	Rat	500 mg/kg
Inhalation		
LC50	Rat	220 ppm, 4 hours
Oral		
LD50	Rat	800 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory sensitisation	No data available.
Skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available.
Carcinogenicity	No data available.
Reproductive toxicity	No data available.
Specific target organ toxicity - single exposure	In high concentrations, vapours may irritate throat and respiratory system and cause coughing.
Specific target organ toxicity - repeated exposure	No data available.

Aspiration hazard No data available.

Mixture versus substance information No data available.

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

SECTION 12: Ecological information

12.1. Toxicity The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Components		Species	Test results
2-Hydroxyethyl methacrylate (CAS 868-77-9)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	213 - 242 mg/l, 96 hours
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 available.

12.3. Bioaccumulative potential No data available for this product.

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 No data available.

Mobility in general The product is slightly soluble in water.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Do not discharge into rivers, lakes, mountains, etc. because the product may affect the environment.

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

The product is not covered by international regulation on the transport of dangerous goods.

RID

The product is not covered by international regulation on the transport of dangerous goods.

ADN

The product is not covered by international regulation on the transport of dangerous goods.

IATA

The product is not covered by international regulation on the transport of dangerous goods.

IMDG

The product is not covered by international regulation on the transport of dangerous goods.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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 regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 143/2011 Annex XIV Substances Subject to Authorisation

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

Not regulated.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding

Not regulated.

Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances

Not regulated.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

2-Hydroxyethyl methacrylate (CAS 868-77-9)
Cumene hydroperoxide (CAS 80-15-9)

Directive 94/33/EC on the protection of young people at work

2-Hydroxyethyl methacrylate (CAS 868-77-9)
Cumene hydroperoxide (CAS 80-15-9)

Other regulations	The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.
National regulations	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. 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	DSD: Directive 67/548/EEC. CLP: Regulation No. 1272/2008. DNEL: Derived No-Effect Level. PNEC: Predicted No-Effect Concentration. PBT: Persistent, bioaccumulative and toxic. vPvB: Very Persistent and very Bioaccumulative.
References	HSDB® - Hazardous Substances Data Bank

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 statements or R-phrases and H-statements under Sections 2 to 15	R7 May cause fire. R21/22 Harmful in contact with skin and if swallowed. R23 Toxic by inhalation. R34 Causes burns. R36 Irritating to eyes. R36/38 Irritating to eyes and skin. R43 May cause sensitisation by skin contact. R48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. 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.