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	Hyloseal 620
Registration number	-
Synonyms	None.
SDS number	38
Issue date	24-July-2013
Version number	01
Revision date	-
Supersedes date	-

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Semi-hardening gasketing/sealing compound.
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	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

Classification	C;R35, R52/53

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 1A	H314 - Causes severe skin burns and eye damage.
Environmental hazards		
Hazardous to the aquatic environment, long-term aquatic hazard	Category 3	H412 - Harmful to aquatic life with long lasting effects.

Hazard summary

Physical hazards	Not classified for physical hazards.
Health hazards	Causes severe burns. Occupational exposure to the substance or mixture may cause adverse health effects.
Environmental hazards	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Specific hazards	Causes severe skin burns and eye damage.
Main symptoms	May cause redness and pain. Causes burns. Extreme irritation of eyes and mucous membranes, including burning and tearing.

2.2. Label elements

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

Contains:	2,2'-dimethyl-4,4'methylenebis(cyclohexylamine)

Hazard pictograms

Signal word Danger

Hazard statements H314 - Causes severe skin burns and eye damage.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention P264 - Wash thoroughly after handling.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363 - Wash contaminated clothing before reuse.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTRE or doctor/physician.

Storage P405 - Store locked up.

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

Supplemental label information Not applicable.

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
2,2'-dimethyl-4,4'methylenebis(cyclohexylamine)	10	6864-37-5 229-962-1	-	612-110-00-1	
Classification: **DSD:** T;R23/24, C;R35, Xn;R22, N;R51/53 **CLP:** Acute Tox. 4;H302, Acute Tox. 3;H311, Skin Corr. 1A;H314, Eye Dam. 1;H318, Acute Tox. 3;H331, Aquatic Chronic 2;H411					
Caprolactam	< 5	105-60-2 203-313-2	-	613-069-00-2	#
Classification: **DSD:** Xn;R20/22, Xi;R36/37/38 **CLP:** Acute Tox. 4;H302, Skin Irrit. 2;H315, Acute Tox. 4;H332, STOT SE 3;H335, STOT SE 3;H336					
3-Glycidoxypropyltrimethoxysilane	1	2530-83-8 219-784-2	-	-	
Classification: **DSD:** Xi;R41 **CLP:** Eye Dam. 1;H318					

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

Composition comments The full text for all R- and H-phrases is displayed in section 16. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4: First aid measures

General information 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. Show this safety data sheet to the doctor in attendance.

4.1. Description of first aid measures

Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin contact Immediately take off all contaminated clothing. Wash off immediately with soap and plenty of water. Wash contaminated clothing before reuse. Get immediate medical attention.

Eye contact Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids wide apart. If irritation persists: Continue flushing during transport to hospital. Take along these instructions.

Ingestion	Rinse mouth. Drink a few glasses of water or milk. Get immediate medical attention.
4.2. Most important symptoms and effects, both acute and delayed	Causes severe skin and eye burns.
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.
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	Use standard firefighting procedures and consider the hazards of other involved materials. 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	Avoid contact with skin and eyes. Wear protective clothing as described in Section 8 of this SDS. In case of spills, beware of slippery floors and surfaces.
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	Scrape up the spilled material. Transfer to a container for disposal. Following product recovery, flush area with water.
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	Avoid contact with skin and eyes. 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)	Semi-hardening gasketing/sealing compound.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
Caprolactam (CAS 105-60-2)	STEL	3 mg/m3	Inhalable dust.
		20 mg/m3	Vapor and dust.
	TWA	10 mg/m3	Vapor and dust.
		1 mg/m3	Inhalable dust.

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components	Type	Value	Form
Caprolactam (CAS 105-60-2)	STEL	40 mg/m3	Vapor and dust.

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components	Type	Value	Form
	TWA	10 mg/m3	Vapor and dust.

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

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL) 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.

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 approved safety glasses or goggles.

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 Under normal conditions, respirator is not normally required. In case of inadequate ventilation: It is recommended to use 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 Viscous liquid.

Physical state Liquid.

Form Liquid.

Colour Light blue.

Odour Mild.

Odour threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

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 Not available.

Vapour density Not available.

Relative density 1.05 (20 °C)

Solubility(ies) Insoluble in water.

Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	20000 mPa·s (20 °C)
Explosive properties	Not available.
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	Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents. Acids.
10.6. Hazardous decomposition products	In case of fire: Carbon monoxide. Carbon dioxide. Silicon oxides. Nitrogen oxides.

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 severe skin burns and eye damage.
Eye contact	Causes serious eye damage.
Symptoms	Causes severe skin burns and eye damage.

11.1. Information on toxicological effects

Components	Species	Test results
Caprolactam (CAS 105-60-2)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
LC50	Rat	8.16 mg/l, 4 hours
Oral		
LD50	Rat	1475 mg/kg

Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory sensitisation	Not classified.
Skin sensitisation	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Caprolactam (CAS 105-60-2) 4 Probably not carcinogenic to humans.

Reproductive toxicity	Not classified.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.
Mixture versus substance information	Not applicable.
Other information	No other specific acute or chronic health impact noted.

SECTION 12: Ecological information

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

Components		Species	Test results
Caprolactam (CAS 105-60-2)			
Aquatic			
Algae	EC50	Green algae (Selenastrum capricornutum)	> 1000 mg/l, 72 hours
Crustacea	EC50	Daphnia magna	> 1000 mg/l, 48 hours
Fish	LC50	Salmo gardineri	707.1 mg/l, 96 hours

12.2. Persistence and degradability No data is available on the degradability of this product.

12.3. Bioaccumulative potential Not available.

Partition coefficient n-octanol/water (log Kow)

Caprolactam (CAS 105-60-2) 0.12

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil Not available.

Mobility in general The product is soluble in water.

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

12.6. Other adverse effects Not available.

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 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.

SECTION 14: Transport information

ADR

14.1. UN number UN1760

14.2. UN proper shipping name CORROSIVE LIQUID, N.O.S. (2,2'-dimethyl-4,4'methylenebis (cyclohexylamine))

14.3. Transport hazard class(es) 8

Subsidiary class(es) -

14.4. Packing group II

14.5. Environmental hazards No

Tunnel restriction code E

Labels required 8

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

RID

14.1. UN number UN1760

14.2. UN proper shipping name CORROSIVE LIQUID, N.O.S. (2,2'-dimethyl-4,4'methylenebis (cyclohexylamine))

14.3. Transport hazard class(es) 8

Subsidiary class(es) -

14.4. Packing group II

14.5. Environmental hazards No

Labels required 8

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

ADN

14.1. UN number	UN1760
14.2. UN proper shipping name	Corrosive Liquid, N.o.s. (2,2'-dimethyl-4,4'methylenebis (cyclohexylamine))
14.3. Transport hazard class(es)	8
Subsidiary class(es)	-
14.4. Packing group	II
14.5. Environmental hazards	No
Labels required	8
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number	UN1760
14.2. UN proper shipping name	Corrosive liquid, n.o.s. (2,2'-dimethyl-4,4'methylenebis (cyclohexylamine))
14.3. Transport hazard class(es)	8
Subsidiary class(es)	-
14.4. Packing group	II
14.5. Environmental hazards	No
Labels required	8
ERG code	8L
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

14.1. UN number	UN1760
14.2. UN proper shipping name	CORROSIVE LIQUID, N.O.S. (2,2'-dimethyl-4,4'methylenebis (cyclohexylamine))
14.3. Transport hazard class(es)	8
Subsidiary class(es)	-
14.4. Packing group	II
14.5. Environmental hazards	
Marine pollutant	No
Labels required	8
EmS	F-A, S-B
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	This substance/mixture is not intended to be transported in bulk.

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. 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

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

2,2'-dimethyl-4,4'methylenebis(cyclohexylamine) (CAS 6864-37-5)
Caprolactam (CAS 105-60-2)

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

2,2'-dimethyl-4,4'methylenebis(cyclohexylamine) (CAS 6864-37-5)

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	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	CLP: Regulation No. 1272/2008. DNEL: Derived No-Effect Level. PBT: Persistent, bioaccumulative and toxic. PNEC: Predicted No-Effect Concentration. 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 statements or R-phrases and H-statements under Sections 2 to 15	R20/22 Harmful by inhalation and if swallowed. R22 Harmful if swallowed. R23/24 Toxic by inhalation and in contact with skin. R35 Causes severe burns. R36/37/38 Irritating to eyes, respiratory system and skin. R41 Risk of serious damage to eyes. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. H302 Harmful if swallowed. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H318 Causes serious eye damage. H331 Toxic if inhaled. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. 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.