

1. Identification

Product identifier	Hylomar Tilebond 402 Part B Resin
Other means of identification	
SDS number	27
Recommended use	Epoxy adhesive.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
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
Supplier:	Hylomar LLC
Address:	158 JJ Lane, Center Point Texas, 78010
Office number:	+1.830.634.2603
Cell number:	+1.830.377.0525
Emergency telephone:	1.866.519.4752 (USA, Canada, Mexico) 1-760-476-3962 Access code: 333544

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Sensitization, skin	Category 1
	Carcinogenicity	Category 2
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Warning
Hazard statement	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Suspected of causing cancer. Toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist/vapors. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response	If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Collect spillage.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	1675-54-3	40 - 50
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	9003-36-5	20 - 30
Barium sulfate	7727-43-7	15 - 20
Talc	14807-96-6	10 - 20
Titanium dioxide	13463-67-7	1 - 5
(3-Glycidoxypropyl)trimethoxysilane	2530-83-8	1 - 2
Quartz	14808-60-7	< 1

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.

4. 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.
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.
Most important symptoms/effects, 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.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Use special protective clothing. Regular protection may not be safe.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. In case of spills, beware of slippery floors and surfaces. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

The product is insoluble in water. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. 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 to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

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.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep container tightly closed and in a well-ventilated place. Store in a cool, dry place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Components	Type	Value
Quartz (CAS 14808-60-7)	TWA	0.05 mg/m ³

US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Barium sulfate (CAS 7727-43-7)	PEL	5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.
Titanium dioxide (CAS 13463-67-7)	PEL	15 mg/m ³	Total dust.

US. OSHA Table Z-3 Permissible Exposure Limits (PEL) for Mineral Dusts (29 CFR 1910.1000)

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m ³	Respirable.
		2.4 mppcf	Respirable.
Talc (CAS 14807-96-6)	TWA	0.1 mg/m ³	Respirable.
		20 mppcf	
Titanium dioxide (CAS 13463-67-7)	TWA	2.4 mppcf	Respirable.
		5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
Barium sulfate (CAS 7727-43-7)	TWA	5 mg/m ³	Inhalable fraction.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.
Talc (CAS 14807-96-6)	TWA	2 mg/m ³	Respirable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	2.5 mg/m ³	Respirable finescale particles
		0.2 mg/m ³	Respirable nanoscale particles

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
Barium sulfate (CAS 7727-43-7)	IDLH	50 mg/m ³
Quartz (CAS 14808-60-7)	IDLH	50 mg/m ³
Talc (CAS 14807-96-6)	IDLH	1000 mg/m ³
Titanium dioxide (CAS 13463-67-7)	IDLH	5000 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Barium sulfate (CAS 7727-43-7)	TWA	5 mg/m ³	Respirable.
		10 mg/m ³	Total
Quartz (CAS 14808-60-7)	TWA	0.05 mg/m ³	Respirable dust.
Talc (CAS 14807-96-6)	TWA	2 mg/m ³	Respirable.

Biological limit values

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

Exposure guidelines

Occupational Exposure Limits are not relevant to the current physical form of the product.

Appropriate engineering controls

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**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Skin protection**Hand protection**

Wear appropriate chemical resistant gloves. Nitrile gloves are recommended. Suitable gloves can be recommended by the glove supplier.

Skin protection**Other**

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

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. 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.

9. Physical and chemical properties**Appearance****Physical state**

Paste.

Form

Paste.

Color

Light grey.

Odor

Low resinous odor.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point	Property has not been measured.
Initial boiling point and boiling range	Property has not been measured.
Flash point	Property has not been measured.
Evaporation rate	Property has not been measured.
Flammability (solid, gas)	Non flammable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Property has not been measured.
Explosive limit - upper (%)	Property has not been measured.
Vapor pressure	Property has not been measured.
Vapor density	Property has not been measured.
Relative density	Property has not been measured.
Solubility(ies)	
Solubility (water)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not applicable, product is a mixture.
Auto-ignition temperature	Property has not been measured.
Decomposition temperature	Property has not been measured.
Viscosity	Property has not been measured.
Other information	
Explosive properties	Not explosive.
Kinematic viscosity	Property has not been measured.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong acids. Strong bases. Amines.
Hazardous decomposition products	Carbon oxides. Silicon oxides. Low molecular weight organic compounds.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics	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.
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Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
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Components	Species	Test Results
Barium sulfate (CAS 7727-43-7)		
<u>Acute</u>		
Oral		
LD50	Rat	> 5000 mg/kg

Components	Species	Test Results
Talc (CAS 14807-96-6)		
Acute		
Dermal		
LD50	Rat	20000 mg/kg
Inhalation		
LC50	Rat	2.1 mg/l, 4 hours
Oral		
LD50	Rat	3870 - 5000 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	May cause an allergic skin reaction.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Suspected of causing cancer.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (CAS 1675-54-3)	3 Not classifiable as to carcinogenicity to humans.	
Quartz (CAS 14808-60-7)	1 Carcinogenic to humans.	
Talc (CAS 14807-96-6)	2B Possibly carcinogenic to humans.	
Titanium dioxide (CAS 13463-67-7)	3 Not classifiable as to carcinogenicity to humans. 2B Possibly carcinogenic to humans.	
NTP Report on Carcinogens		
Quartz (CAS 14808-60-7)	Known To Be Human Carcinogen.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Quartz (CAS 14808-60-7)	Cancer	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Talc may have effects on the lungs, resulting in talc pneumoconiosis. However: Not relevant, due to the form of the product.	
Aspiration hazard	Not relevant, due to the form of the product.	
Chronic effects	Prolonged exposure may cause chronic effects.	

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components	Species	Test Results	
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (CAS 1675-54-3)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Daphnia magna	1.7 mg/l, 48 hours
Barium sulfate (CAS 7727-43-7)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Tubificid worm (Tubifex tubifex)	28.61 - 38.03 mg/l, 48 hours
Talc (CAS 14807-96-6)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Algae	7203 mg/l, 96 hours
Crustacea	LC50	Aquatic Invertebrates	36812 mg/l, 48 hours

Components	Species	Test Results
Fish	LC50	Fish > 895810 - < 1100000 mg/l, 96 hours
Persistence and degradability	No data is available on the degradability of this product.	
Bioaccumulative potential	No data available on bioaccumulation.	
Partition coefficient n-octanol / water (log Kow)		
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (CAS 1675-54-3) 3.84		
Mobility in soil	The product is insoluble in water and will sediment in water systems.	
Other adverse effects	None known.	

13. Disposal considerations

Disposal instructions	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.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	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.

14. Transport information

DOT

UN number	UN3077
UN proper shipping name	Environmentally hazardous substances, solid, n.o.s. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	III
Environmental hazards	
Marine pollutant	Yes.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	8, 146, 335, A112, B54, IB8, IP3, N20, T1, TP33
Packaging exceptions	155
Packaging non bulk	213
Packaging bulk	240

IATA

UN number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	Yes.
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane)
Transport hazard class(es)	
Class	9
Subsidiary risk	-

Packing group	III
Environmental hazards	
Marine pollutant	Yes.
EmS	F-A, S-F
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
General information	The transportation information provided represents the regulatory transport classification of the product without consideration to packaging, quantity, or modal restrictions and exceptions. It is the user's responsibility to determine the appropriate packaging and modal requirements and/or limitations for the product quantity being shipped.

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.	
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated.	
CERCLA Hazardous Substance List (40 CFR 302.4)	Not listed.	
SARA 304 Emergency release notification	Not regulated.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)	Quartz (CAS 14808-60-7)	Cancer lung effects immune system effects kidney effects
Toxic Substances Control Act (TSCA)	All components of the mixture on the TSCA 8(b) inventory are designated "active".	
Superfund Amendments and Reauthorization Act of 1986 (SARA)		
SARA 302 Extremely hazardous substance	Not listed.	
SARA 311/312 Hazardous chemical	Yes	
Classified hazard categories	Skin corrosion or irritation Serious eye damage or eye irritation Respiratory or skin sensitization Carcinogenicity	
SARA 313 (TRI reporting)	Not regulated.	
Other federal regulations		
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List	Not regulated.	
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)	Not regulated.	
Safe Drinking Water Act (SDWA)	Contains component(s) regulated under the Safe Drinking Water Act.	
US state regulations		
US. Massachusetts RTK - Substance List	Barium sulfate (CAS 7727-43-7) Quartz (CAS 14808-60-7) Talc (CAS 14807-96-6) Titanium dioxide (CAS 13463-67-7)	
US. New Jersey Worker and Community Right-to-Know Act	Barium sulfate (CAS 7727-43-7) Quartz (CAS 14808-60-7) Talc (CAS 14807-96-6)	

Titanium dioxide (CAS 13463-67-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Barium sulfate (CAS 7727-43-7)

Quartz (CAS 14808-60-7)

Talc (CAS 14807-96-6)

Titanium dioxide (CAS 13463-67-7)

US. Rhode Island RTK

Barium sulfate (CAS 7727-43-7)

Quartz (CAS 14808-60-7)

Talc (CAS 14807-96-6)

Titanium dioxide (CAS 13463-67-7)

California Proposition 65



WARNING: This product can expose you to chemicals including Talc, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Quartz (CAS 14808-60-7)

Listed: October 1, 1988

Talc (CAS 14807-96-6)

Listed: April 1, 1990

Titanium dioxide (CAS 13463-67-7)

Listed: September 2, 2011

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Quartz (CAS 14808-60-7)

Talc (CAS 14807-96-6)

Titanium dioxide (CAS 13463-67-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	28-July-2023
Revision date	-
Version #	01
Further information	HMIS® is a registered trade and service mark of the ACA.
HMIS® ratings	Health: 2* Flammability: 1 Physical hazard: 0
List of abbreviations	EC50: Effective Concentration, 50%. IDLH: Immediately Dangerous To Life or Health. LC50: Lethal Concentration, 50%. LD50: Lethal Dose, 50%. PEL: Permissible Exposure Limit.

References

IARC Monographs. Overall Evaluation of Carcinogenicity
IUCLID Dataset (European Chemicals Bureau)
Registry of Toxic Effects of Chemical Substances (RTECS)

Disclaimer

Hylomar Ltd. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.