


1. Identification

Product identifier	Hylobond 5101 Adhesive
Other means of identification	
SDS number	32
Recommended use	Structural adhesive.
Recommended restrictions	Use in accordance with supplier's recommendations.
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
Emergency telephone:	1.866.519.4752 (USA, Canada, Mexico) 1-760-476-3962 Access code: 333544

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 2
Health hazards	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	
Label elements		

Signal word	Danger
Hazard statement	Highly flammable liquid and vapor. Causes severe skin burns and eye damage. Causes serious eye damage. May cause an allergic skin reaction. May cause respiratory irritation. Toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist/vapors. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing must not be allowed out of the workplace. Use only outdoors or in a well-ventilated area. Avoid release to the environment.

Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.
Storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool. 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	%
Methyl methacrylate	80-62-6	25 - 50
Methacrylic acid	79-41-4	<= 10
Dipropylene glycol dibenzoate	27138-31-4	<= 10
Hexan-6-olide	502-44-3	<= 3
Dibenzoyl peroxide	94-36-0	<= 2.4
Dibutyl maleate	105-76-0	< 1
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	28961-43-5	< 1
Rosin	8050-09-7	< 1
trizinc bis(orthophosphate)	7779-90-0	<= 0.3

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	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center 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. Call a physician or poison control center immediately.
Ingestion	Rinse mouth thoroughly. Get medical attention if any discomfort occurs.
Most important symptoms/effects, acute and delayed	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 an allergic skin reaction. May cause respiratory irritation.
Indication of immediate medical attention and special treatment needed	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.
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.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Alcohol resistant 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	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. 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	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor.

6. Accidental release measures

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 vapor. Avoid contact with eyes, skin, and clothing. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. 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 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. Dike 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.

Never return spills to original containers for re-use. 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 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. Persons susceptible to allergic reactions should not handle this product. Do not breathe mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities 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. Store locked up. Store in tightly closed container. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value
Dibenzoyl peroxide (CAS 94-36-0)	PEL	5 mg/m ³
Methyl methacrylate (CAS 80-62-6)	PEL	410 mg/m ³
		100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Dibenzoyl peroxide (CAS 94-36-0)	TWA	5 mg/m ³
Methacrylic acid (CAS 79-41-4)	TWA	20 ppm
Methyl methacrylate (CAS 80-62-6)	STEL	100 ppm
	TWA	50 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Dibenzoyl peroxide (CAS 94-36-0)	TWA	5 mg/m ³
Methacrylic acid (CAS 79-41-4)	TWA	70 mg/m ³ 20 ppm
Methyl methacrylate (CAS 80-62-6)	TWA	410 mg/m ³ 100 ppm
Rosin (CAS 8050-09-7)	TWA	0.1 mg/m ³

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

Exposure guidelines**US - California OELs: Skin designation**

Methacrylic acid (CAS 79-41-4) Can be absorbed through the skin.

US - Tennessee OELs: Skin designation

Methacrylic acid (CAS 79-41-4) Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

Methacrylic acid (CAS 79-41-4) Can be absorbed through the skin.

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

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

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.

Skin protection

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

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

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 Liquid.

Form Liquid.

Color White.

Odor Strong. Acrylic.

Odor threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point 53.6 °F (12.0 °C) Closed Cup

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.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	0.96 - 1.02
Solubility(ies)	
Solubility (water)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	> 0.4 cm ² /s Kinematic.
Viscosity temperature	68 °F (20 °C)
Other information	
Explosive properties	Not explosive.
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	Hazardous polymerization may occur.
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.
Incompatible materials	Strong oxidizing agents. Alkali metals. Peroxides. Strong oxidizers, strong acids, and strong bases.
Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

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 related to the physical, chemical and toxicological characteristics 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 an allergic skin reaction. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
Methacrylic acid (CAS 79-41-4)		
Acute		
Dermal		
LD50	Rabbit	500 - 1000 mg/kg
Inhalation		
LC50	Rat	7.1 mg/l, 4 Hours
Oral		
LD50	Rat	1320 mg/kg

Components	Species	Test Results
Methyl methacrylate (CAS 80-62-6)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg, 24 Hours
Inhalation		
<i>Vapor</i>		
LC50	Rat	29.8 mg/l, 4 Hours
Propylidynetrimethanol, 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 or skin sensitization		
ACGIH sensitization		
METHYL METHACRYLATE (CAS 80-62-6)	Dermal sensitization	
ROSIN CORE SOLDER THERMAL DECOMPOSITION PRODUCTS (COLOPHONY) (CAS 8050-09-7)	Dermal sensitization	
	Respiratory sensitization	
Respiratory sensitization	Based on available data, the classification criteria are not met.	
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	Not classifiable as to carcinogenicity to humans.	
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.	
NTP Report on Carcinogens		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	May cause respiratory irritation.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	Prolonged inhalation may be harmful.	
Further information	No other specific acute or chronic health impact noted.	
12. Ecological information		
Ecotoxicity	Toxic to aquatic life with long lasting effects.	

Components	Species	Test Results
Dibenzoyl peroxide (CAS 94-36-0)		
Aquatic		
<i>Acute</i>		
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		
<i>Acute</i>		
Algae	EbC50	Pseudokirchnerella subcapitata 20 mg/l, 72 hours
<i>Chronic</i>		
Algae	NOEC	Pseudokirchnerella subcapitata 8.2 mg/l, 72 hours
Methyl methacrylate (CAS 80-62-6)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Daphnia magna 69 mg/l, 48 hours
<i>Chronic</i>		
Fish	NOEC	Zebrafish 9.4 mg/l, 35 days
Propylidyntrimethanol, ethoxylated, esters with acrylic acid (CAS 28961-43-5)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fish 1.95 mg/l, 96 hours
<i>Chronic</i>		
Algae	EC50	Desmodesmus subspicatus 2.2 mg/l, 72 hours
Rosin (CAS 8050-09-7)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Daphnia magna 1.6 mg/l

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

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

Mobility in soil The product is insoluble in water.

Other adverse effects None known.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. 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	UN1133
UN proper shipping name	Adhesives, containing a flammable liquid
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B1, B52, IB3, T2, TP1
Packaging exceptions	150
Packaging non bulk	173
Packaging bulk	242

IATA

UN number	UN1133
UN proper shipping name	Adhesives containing flammable liquid
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	Yes
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1133
UN proper shipping name	ADHESIVES containing flammable liquid
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-E, S-D
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.

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)

Methyl methacrylate (CAS 80-62-6) Listed.

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

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA)

One or more components of the mixture are not on the TSCA 8(b) inventory or are designated "inactive".

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Flammable (gases, aerosols, liquids, or solids)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Dibenzoyl peroxide	94-36-0	<= 2.4
Methyl methacrylate	80-62-6	25 - 50

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Methyl methacrylate (CAS 80-62-6)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Methyl methacrylate (CAS 80-62-6) Low priority

US state regulations

US. Massachusetts RTK - Substance List

Dibenzoyl peroxide (CAS 94-36-0)
Methacrylic acid (CAS 79-41-4)
Methyl methacrylate (CAS 80-62-6)

US. New Jersey Worker and Community Right-to-Know Act

Dibenzoyl peroxide (CAS 94-36-0)
Methacrylic acid (CAS 79-41-4)
Methyl methacrylate (CAS 80-62-6)
trizinc bis(orthophosphate) (CAS 7779-90-0)

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

Dibenzoyl peroxide (CAS 94-36-0)
Methacrylic acid (CAS 79-41-4)
Methyl methacrylate (CAS 80-62-6)
Rosin (CAS 8050-09-7)
trizinc bis(orthophosphate) (CAS 7779-90-0)

US. Rhode Island RTK

Dibenzoyl peroxide (CAS 94-36-0)
Methacrylic acid (CAS 79-41-4)
Methyl methacrylate (CAS 80-62-6)
Rosin (CAS 8050-09-7)

California Proposition 65



WARNING: This product can expose you to Sulfuric acid, 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

Sulfuric acid (CAS 7664-93-9) Listed: March 14, 2003

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

Methyl methacrylate (CAS 80-62-6)

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

Issue date 19-April-2020

Revision date -

Version # 01

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings Health: 3
Flammability: 3
Physical hazard: 0

NFPA ratings**List of abbreviations**

DOT: Department of Transportation (49 CFR 172.101).
IATA: International Air Transport Association.
IMDG Code: International Maritime Dangerous Goods Code.
MARPOL: International Convention for the Prevention of Pollution from Ships.
STEL: Short-Term Exposure Limit.
LD50: Lethal Dose, 50%.
LC50: Lethal Concentration, 50%.
EC50: Effective Concentration, 50%.
NOEC: No observed effect concentration.

References

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

Disclaimer

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