

<b>Product:</b>	Hylomar Universal Blue, grades, Light, Medium & Heavy, H50,L14 & L20 Hylomar Aero Grade PL32, Light, Medium & Heavy; Hylomar Aerosol Grade (Bulk)
<b>Supplier:</b>	Hylomar Limited. Cale Lane. New Springs. WIGAN. WN2 1JT Tel; +44 (0)1942 617000. Fax; +44 (0)1942 617001 E-mail; <a href="mailto:info@hylomar.co.uk">info@hylomar.co.uk</a> US Emergency Response No 1-800-373-7542

2. Composition/Information on hazardous ingredients			
Material	%	Risk	CAS Number
Polyurethane/Polyester mixture	20 – 60		
Dichloromethane	25 – 75	R40	75-09-02

<b>3. Hazards identification</b>	<b>HARMFUL</b> , contains Dichloromethane. Limited evidence of a carcinogenic effect. UK maximum exposure limit (MEL) 8hr TWA = 100ppm. Exposure well in excess of the MEL may result in loss of consciousness and can prove suddenly fatal. Converted in the body to carbon monoxide, which reduces the oxygen carrying capacity of the blood.
----------------------------------	---

<b>4. First aid - Effects of Over Exposure By</b>	4.1	<b>Eye Contact:</b> Severe eye irritation, water & redness. Risk of eye lesions.
	4.2	<b>Skin Contact:</b> Can be absorbed by intact skin. Slight irritation. In case of prolonged contact risk of burns. In case of repeated contact dry & chapped skin, risk of chronic dermatitis.
	4.3	<b>Inhalation:</b> Slight nose irritation. At high concentrations, feelings of intoxication, restlessness, dizziness, nausea, vomiting, drowsiness, narcosis, cardiac arrhythmia, risk of chemical pneumonitis, pulmonary oedema. In case of repeated or prolonged exposure, headaches, fatigue & risk of nervous system effects
	4.4	<b>Ingestion:</b> Breath smells of chloroform. Severe irritation of the mouth, throat, oesophagus & stomach. Nausea, vomiting, abdominal cramps and diarrhoea. Feelings of intoxication, restlessness, dizziness & drowsiness. Risk of cardiac arrhythmia, liver & kidney alterations.
	<b>Treatment of Over Exposure By:</b>	
	4.5	<b>Eye Contact:</b> Flush eyes with running water for 15 minutes, while keeping the eyelids wide open. Consult with an ophthalmologist in all cases.
	4.6	<b>Skin Contact:</b> Remove all contaminated shoes & clothing. Clean with soap & water. Clean clothing. Consult with Doctor in case of persistent pain or redness
	4.7	<b>Inhalation:</b> Remove to fresh air, lying person down with the head higher than the body. Keep warm. Oxygen or cardiopulmonary resuscitation if necessary. Consult with Doctor in case of respiratory & nervous symptoms.
	4.8	<b>Ingestion:</b> Consult with Doctor in all cases, take to hospital. If subject is completely conscious rinse mouth with water – do not allow vomiting. If the subject is unconscious loosen collar & tight clothing, lay victim on his/her left side. Oxygen or cardiopulmonary resuscitation if necessary. Keep warm. Pulmonary resuscitation (Oxygen therapy). Prevention or treatment of pulmonary oedema & bacterial secondary infection. Rest & 48 hours medical surveillance.
4.9	<b>General:</b> Can induce an increase of the carboxyhemoglobin level. Do not give adrenergic drugs	

<b>5. Fire fighting measures</b>	4.10	<b>Suitable Extinguishing Media :</b> Water spray, foam, powder & CO2
	4.11	<b>Unsuitable Extinguishing Media :</b> No restriction
	4.12	<b>Exposure Hazards:</b> Non-combustible. Formation of dangerous gas/vapours in case of decomposition (see Section 10). No flash point but gas/vapours may form flammable mixtures in presence of air.
	4.13	<b>Protective Equipment for Fire Fighters:</b> Wear self-contained breathing apparatus when in close proximity or in confines spaces. Protect intervention team with water spray when approaching fire.

<b>6. Accidental release measures</b>	6.1	<b>Personal Precautions:</b> Local ventilation. Protective clothing, gloves, goggles & overalls
	6.2	<b>Environmental Precautions:</b> Avoid discharge into environment (sewers, rivers, and soils). Notify appropriate authorities in case of discharge.
	6.3	<b>Clean-Up and Neutralisation Methods :</b> If possible dam large quantities with

Revision date	15.12.05	Page 1 of 3
Product name	Hylomar Universal Blue – all grades. Issue 6 "Safety data sheet according to Directive 91/155/EC, as amended".	

		sand or earth. Remove product with inert absorbent, sand or vermiculite. Place everything in a closed, labelled container compatible with the product. Store in a safe isolated place. Disposal, see section 13.
<b>7. Handling and storage</b>	7.1	<b>Precautions for Safe Handling</b> : Observe normal standards of industrial hygiene for handling chemicals. Avoid contact with skin & eyes. Avoid breathing vapours.
	7.2	<b>Storage Precautions</b> : Store in a cool, dry place between 5° - 25°C with adequate ventilation.
	7.3	<b>Other Information</b> : Shelf life is 2 years when stored in original unopened containers as detailed in para 7.2
<b>8. Exposure controls/Personal protection</b>	8.1	<b>Technical Protective Measures</b> : Atmospheric levels of vapour should be maintained at the lowest level reasonably practicable below the control limit
	8.2	<b>Exposure Control Limits</b> : UK Maximum Exposure Limit (MEL) 8 hour TWA = 100 ppm (STEL 15 min TWA = 300 ppm)
	8.3	<b>Respiratory Protection</b> : Face mask with type A cartridge in cases where control limits may be exceeded. Self contained breathing apparatus in case of large uncontrolled emissions or in all circumstances when the mask & cartridge do not give adequate protection. Use only HSE approved equipment.
	8.4	<b>Hand Protection</b> : Solvent resistant gloves
	8.5	<b>Skin Protection</b> : Overalls
	8.6	<b>Eye / Face Protection</b> : Safety glasses with eye shields, or goggles
	8.7	<b>Recommended monitoring methods</b> : Drager tube, methylene chloride 100/a
<b>9. Physical and chemical properties</b>	9.1	<b>Physical State</b> : Thixotropic gel
	9.2	<b>Colour</b> : Blue
	9.3	<b>Odour</b> : Sweet
	9.4	<b>Boiling Point / Range</b> : 40°C
	9.5	<b>Flammability</b> : N/A
	9.6	<b>Flashpoint</b> : None
	9.7	<b>Autoignition Temperature</b> : 600°C
	9.8	<b>Explosive Limits</b> : Can form explosive mixtures with oxygen
	9.9	<b>Vapour Pressure</b> : 355mm Hg @ 20°C, 515mm Hg @ 30°C
	9.10	<b>Vapour Density</b> : 2.93 (air = 1)
	9.11	<b>Relative density / Specific Gravity</b> : 1.32
	9.12	<b>Solubility in Fats and Oils</b> : Degreases. Miscible with most organic solvents
	9.13	<b>Viscosity</b> : Light thixotropic gel
<b>10. Stability and reactivity</b>	10.1	<b>Conditions to Avoid</b> : Contact with red-hot surfaces or naked flames may generate acid fumes.
	10.2	<b>Materials to Avoid</b> : Alkali metals may cause reaction.
	10.3	<b>Hazardous Decomposition Products</b> : Contact with red-hot surfaces or naked flames may generate small quantities of toxic acid fumes or hydrogen chloride
<b>11. Toxicological Information</b>		<b>Acute Toxicity</b> : LD50 Oral Rat; 1410 – 2524 mg/kg, LD50 Dermal Rat; >2000 mg/kg, LC50 Inhalation Rat; 6 hr 15000 ppm, Irritation; Rabbit – irritant to skin & eyes, Sensitization, no data. <b>Chronic Toxicity</b> : Inhalation, after repeated exposure, various species, target organ; liver, kidney, lungs, central nervous system > = 1000 ppm. Mutagenic effect in vitro but not vivo. No effect on reproduction. Oral route, after repeated exposure, target organ; liver > = 200 mg/kg. Inhalation after prolonged exposure, mouse, target organ; liver/lungs, carcinogenic effect. Inhalation after a single exposure, cardiac sensitization following adrenergic stimulation. <b>Comments</b> : Irritant effect for skin & eyes. Risk of anaesthetic effect & cardiac sensitization. Carcinogenic effect not applicable to human. Risk of effect on the kidney, liver & lung. Risk of the central nervous system effect. The compound is metabolised into carbon monoxide in various animal species & humans leading to methemoglobinemia

Revision date	15.12.05	Page 2 of 3
Product name	Hylomar Universal Blue – all grades. Issue 6 "Safety data sheet according to Directive 91/155/EC, as amended".	

<p><b>12. Ecological information</b></p>	<p><b>Acute ecotoxicity:</b> Fishes, various species LC50, 96 hr between 135 – 502 mg/l. Fishes, Salmo gairdneri, LOEC 96 hr, 5.5 mg/l. Conditions fish embryos crustaceans, Daphnia EC 50, 48 hr between 135 – 2270 mg/l. Algae, various species, EC 50, 48 hr &gt; 662 mg/l</p> <p><b>Chronic ecotoxicity:</b> Fishes, Poecilia reticulata, LC50, 14 days 295 mg/l, Fishes Pimephales promelas, NOEC equilibrium 8 days 357 mg/l</p> <p><b>Mobility:</b> Air, Henry's Law constant (H) between 200 – 400 Pa.m<sup>3</sup>/mol. Conditions 20°C. Water evaporation, t<sub>1/2</sub> between 0.3 – 48 hrs. Conditions environmental concentration: 1ppb – 1 ppm. Soil sediments, log KOC = 1.68. Result significant evaporation &amp; percolation. Conditions: calculated value.</p> <p><b>Abiotic degradation:</b> Air indirect photo-oxidation, t<sub>1/2</sub> = 6 months, conditions: sensitizer OH radical. Water, hydrolysis, t<sub>1/2</sub> &gt; 1.5 years. Result: non-significant hydrolysis and photolysis. Soil. Result: non-significant hydrolysis.</p> <p><b>Biotic degradation:</b> Aerobic test: Ready biodegradability/MITI, degradation between 5 – 25% (BOD) 28 days. Result: non-readily biodegradable. Aerobic test: intrinsic biodegradability, degradation = 100%, 28 days, result intrinsically biodegradable. Conditions, adapted culture Aneobic t<sub>1/2</sub> = 11 days</p> <p><b>Potential for bioaccumulation:</b> Bioconcentration: Fishes, Cyprinus carpio, BCF between 6.4 – 40, 42 days. Conditions: test concentration 0.025 ppm Bioconcentration: Log POW between 1.25 – 1.3. Conditions: measured value</p> <p><b>Comments:-</b> Product is not significantly hazardous for the environment as; low toxicity for aquatic organisms, low bioaccumulation potential, considerable volatility, weak persistence (global, half life ca 6 months)</p>
<p><b>13. Disposal considerations</b></p>	<p><b>Disposal Considerations :</b> Residues should be stored in drums and advice sought from Specialist Waste Disposal Contractors</p> <p><b>Statutory provisions;</b> local Waste disposal Authority</p>
<p><b>14. Transport information</b></p>	<p><b>UN Number:</b> 2810</p> <p><b>Packing Group:</b> III. Class 6.1</p> <p><b>Proper Shipping Name:</b> Toxic liquid organic N.O.S. Contains Dichloromethane</p> <p><b>Marine Pollutant:</b> No</p>
<p><b>15. Regulatory Information</b></p>	<p><b>15.1 Classification :</b> Carc, Cat 3, Harmful</p> <p><b>15.2 Risk Phrases :</b> R40 Limited evidence of a carcinogenic effect.</p> <p><b>15.3 Safety Phrases :</b> S2 Keep out of reach of Children. S23. Do not breath fumes. S24/25. Avoid contact with eyes &amp; skin. S36/37. Wear suitable protective clothing &amp; gloves</p> <p><b>15.4 Specific EC Controls:</b></p> <p><b>15.5 Relevant UK Legislative Controls :</b> Chip 3 Regulations 2002</p>
<p><b>16. Other information</b></p>	<p><b>16.1 Training Advice:</b> n/a</p> <p><b>16.2 Recommended Uses and Restrictions:</b> For use as a flange and thread sealant</p> <p><b>16.3 Suppliers of Key Data :</b> Suppliers Safety Data Information. Chip 3 regulations 2002 Amended 2005.</p>
<p>Every effort has been made to ensure that the information in this Material Safety Data Sheet is accurate and reliable, but the company cannot accept liability for any loss, injury or damage, which may result from its use. Data given in this Safety Data Sheet is solely for the guidance in safe handling and use of the product by customers - they do not constitute a specification. Customers are reminded that there may be applications of our products, which are, protected by patent, under which they have no rights whatsoever. If any difficulties should arise, we will be happy to discuss them. Customers are encouraged to carry out their own tests. Before using any product, read the label carefully.</p>	

Tony Fullerton

Revision date	15.12.05	Page 3 of 3
Product name	Hylomar Universal Blue – all grades. Issue 6 "Safety data sheet according to Directive 91/155/EC, as amended".	