UNISHIELD

WaterBorne Epoxy Acrylic; Coatings and Liners for Decks, Roofs & Walls

Unishield 8 November 2006

Description:	Unishield combines epoxy and acrylic polymers to produce coatings with; excellent water resistance, good chemical, weather and wear resistance, flexibility and adhesion to most common building materials. Unishield is a high solids 3 pack waterborne epoxy acrylic, glass flake reinforced, liquid applied coating which dries and chemically cures to a hard, durable finish. COMPOSITION PACK A — WATER BASED EPOXY HARDNER PACK B — EPOXY RESIN PACK C — ACRYLIC LIQUID, MINERAL FILLERS, PIGMENTS AND GLASS FLAKE Unishield is available in 2 grades:- **UNISHIELD (USD) - Plywood**: HARD; CHEMICAL RESISTANCE; FLEXIBLE; EPOXY: ACRYLIC = 1:6 **UNISHIELD X (USDX) - Concrete**: HARDER; MORE CHEMICAL RESISTANCE; LESS FLEXIBLE; EPOXY : ACRYLIC = 1:3 Both grades can be used separately or in combination with CSM (Chopped Strand Mat) fibreglass and SV (Surfacing Veil) to provide insitu, seamless liner systems for walls, decks, roofs, tanking and chemical containment.
Recommended Uses:	Unishield combined with CSM fibreglass mat and antiskid aggregates produces; seamless, liquid applied, water tight, trafficable liners that conform to any shape, for: decks, roofs, patios, walkways, tanking below grade, under tiles, bunding for chemical storage pads, shower pans and gutters. Unishield combined with SV, or CSM and SV produces; smooth, joint-less liners with impact, abrasion and chemical resistance for walls and surfaces in Food Processing and critical hygiene areas. Unishield can be used exterior/ interior as a coating system in aggressive environments to provide long life and low maintenance on most substrates. Unishield can be used to refurbish or repair many existing waterproofing membranes and materials on Decks, Roofs and Walls. Unishield coatings and liners can be applied onto concrete, concrete block, fibre cement/compressed cement sheets, tanalised plywood, wood, expanded/extruded polystyrene, galvanised steel and existing painted surfaces.
Features:	Low environmental impact, low toxicity, water-based application and cleanup, easy installation, repair or maintenance with minimum interruption to factory/plant operations. Versatile, multi task Unishield provides; weather, wear, water and chemical resistance protection for a wide range of substrates and end uses. Cost effective alternatives for seamless liners, trafficable membranes and chemical containment systems.
Colour:	Available in white, most pastels and limited range of mid-tone colours.

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Technical Data:	Classification:	3 Component Water-based Epoxy Acrylic Coating and laminating medium.	
		Unishield	**Unishield X**
	SOLID Wt%	61%	61%
	SpG (mixed)	1.31kg/L	1.30kg/L
	Pot Life @ 20^{0}C	3 hours	2.5 hours
	Dry Time @ 15^{0}C 100 microns WFT	4 hours	4 hours
	Application Temperature	5-30 ^{0}C	5-30 ^{0}C
	Application	Brush, Roll, Spray	
	Shelf Life	All Components 3 years, Protect from cold.	

Applications:

Coating System

Unishield and Unishield X can be used separately or in combination to produce industrial coating systems designed to suit service conditions and substrates.

Typical Coating System

Base Coat Body Coat Top Coat	Onto prepared and primed surface apply 3 coats of Unishield or Unishield X at 8m^2/L/coat to give a total d.f.t (dry film thickness) of 180 microns.
Consumption	0.375L / m^2 or 2.67 m^2 / L

Wall Liners

Unishield and Unishield X combine with CSM and/or S.V to produce seamless lining systems for walls in hygiene areas. For example:-

Unishield Wall Liner – Hygiene Heavy Duty

Base Coat	Onto prepared and primed surface apply Unishield X up to 5 m^2/ L or 0.2 L / m^2
Laminate 1	Embed CSM 225G with Unishield X @ 1.67 m^2 / L or 0.6L /m^2
Fill Coat	Apply Unishield X @ 4 m^2/ L or 0.250 L /m^2
Laminate 2	Embed SV – ECR30 with Unishield X @ 4 m^2 / L or 0.250L /m^2
Top Coats	Apply 2 coats of Unishield X @ 6 m^2 / L / Coat or 0.170L /m^2 /Coat
Consumption	Unishield X 1.800L / m^2 or 0.56 m^2 / L
Thickness	Minimum 1.5mm

Unishield Wall Liner – Hygiene Medium Duty

Base Coat	Onto prepared and primed surface apply Unishield X up to 5 m^2 / L or 0.200L /m^2
Laminate	Embed SV – ECR30 with Unishield X @ 2.5m^2 / L or 0.400L /m^2
Top Coats	Apply 2 coats of Unishield X @ 6 m^2 / L / Coat or 0.170L /m^2 / Coat
Consumption	Unishield X 1 L / m^2 or 1 m^2 / L
Thickness	Minimum 0.9mm

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The information in this Datasheet is accurate to the best of our knowledge at the time of printing. Due however to the wide variety of use, procedures and application, we give no warranty nor undertake responsibility in any form. The Company reserves the right to alter information, formulations and/or parameters at any time without notice.

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Roof – Deck Liners

All Unishield Roof & Deck Liners contain Anti Skid Grit (ASG) available in 3 grades (G1, G2, and G3). Watertight, hard wearing liners can be applied onto concrete and plywood for domestic, commercial and car park decks.

Unishield Deck Liner ASG1, Medium Duty - Plywood

Joints	Hitchins recessed joint treatment to all joins in plywood.
Base Coat	Onto prepared and primed surface apply Unishield @ 8-10 m^2/L or 0.125-0.100 L/ m^2.
Laminate	Embed CSM 225G in Unishield @ 1.67 m^2 / L or 0.6L / m^2.
Fill Coats	Apply 2 coats of Unishield: ASG1, 4:1; @ 4 m^2 / L / Coat or 0.250L /m^2 / Coat.
Top Coat	Apply Unishield @ 6-10 m^2 / L / Coat or 0.166-0.100 L /m^2 / Coat depending in required surface profile.
Consumption	Unishield 1.350L / m^2 or 0.74 m^2 / L
Thickness	Minimum 1mm.

Unishield Deck Liner ASG2, Medium Duty – Car parks

Base Coat	Onto prepared and primed surface apply Unishield X @ 8-10 m^2 / L or 0.100-0.125 L / m^2.
Laminate 1	Embed CSM 225G with Unishield X @ 1.67 m^2 / L or 0.6L / m^2.
Fill Coat	Apply Unishield X: ASG1, 4:1 @ 4 m^2/ L or 0.250 L / m^2.
Laminate 2	Embed CSM 225G with Unishield X: ASG1, 4:1 @ 1.3 m^2 / L or 0.770L / m^2.
Fill Coat	Apply Unishield X: ASG2, 4:1 @ 3 m^2/ L or 0.333 L / m^2.
Top Coat	Apply Unishield @ 6-10 m^2 / L / Coat or 0.166-0.100 L /m^2 / Coat depending in required surface profile.
Consumption	Unishield 2.411 L/ m^2 or 0.415 m^2/L
Film Build	Minimum 2mm.

Chemical Containment Liners – Bunding System

Unishield X seamless membrane provides a platform for a range of specialised chemical resistant Topcoats.

Chemical Containment – Bunding with Formrok 335 Topcoat.

Base Coat	Onto prepared and primed surfaces apply Unishield X @ 5 m^2 / L or 0.200L / m^2
Laminate CSM 300	Embed CSM 300G with Unishield X @ 1.25 m^2 / L or 0.8L / m^2
Body Coat	Apply Unishield X @ 4 m^2/ L or 0.25 L / m^2
Top Coats	Apply 2 coats of Formrok 335 @ 8 m^2 / L / Coat or 0.125L / m^2 / Coat
Consumption	Unishield X 1.25 L / m^2 or 0.8 m^2 / L
Formrok 335	0.25 L / m^2 or 4 m^2 / L
CSM 300	1 m^2
Film Build	Total thickness 1.2mm (1200 microns) approximately.

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Surface Preparation:	**General** All surfaces must be clean, dry and free of oils, grease and dirt. **Primer Selection** Unishield can be used as a primer/ sealer however for most applications we recommend Formstik Clear or Formshield Coloured, both these water base epoxy coatings provide the optimum in adhesive, sealing, waterproofing and inter-coat adhesion properties to most building materials. **Concrete** New concrete should be cured 28 days. Formstik Clear primer for general use. **Tanalised Plywood** For exterior exposure and wet areas use Formshield Coloured Primer. For interior and non-critical areas use Formstik Clear Primer. **Fibre Cement and Compressed Cement Sheets** Formstik Clear Primer for general use or in combination with Formshield coloured primer for critical areas.

Packaging:	All batch sizes are supplied as 3 components in plastic containers. Unishield 14L 7L 3.5L Unishield X 16L 8L 4L

Health & Safety:	All components are low toxicity however some individuals may develop Epoxy sensitivity which can produce allergy-like symptoms. Pack A and Pack C are water-based and spills can be removed by water or by using sand to absorb the liquid. Pack B is an Epoxy Resin and is not water-based until mixed with Pack A. Spills can be removed with sand to absorb the liquid and strong degreasing agents and detergents to remove the residue. Provide adequate Ventilation in confined areas. Refer to Material Safety Data Sheets.

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