

# ULTRA FLEX TRAFFIC

## External Trafficable UV Membrane

Release: 1st July 2010  
Review: 21 June 2011

### PRODUCT DESCRIPTION:

Ultra Flex Traffic is a high quality UV resistant (external) trafficable reinforced membrane. The membrane is designed to cope with both pedestrian and, if additionally reinforced with fibre mesh or geo-textile fabric, vehicular traffic.

The product is made from safe waterbased ingredients, is not toxic and has no odour.



### PRODUCT ADVANTAGES:

Cost effective system which is less expensive than imported trafficable systems. The product is easily applied via roller or brush. The product exhibits high UV resistance and is available in a range of colours.

### PRODUCT USES:

Ultra Flex is suitable for all internal and external applications and where a pedestrian trafficable waterproofing membrane is required.

These areas can include balconies, roof top areas, roofs, terraces, decks, garages, parking bays, walkways and any surface requiring a strong trafficable waterproofing membrane. With textile reinforcing, the product can also be applied in areas of vehicular traffic.

### SUBSTRATE PREPARATION:

Substrates should be sound and smooth finished, free from oil and grease, waxes, dust, laitance and all loose

matter. Masonry surfaces must be pointed flush and surface defects repaired. Do not apply if rain is imminent as membranes can re-emulsify up to a day after application – depending on the weather conditions. Galvanised metals and steel substrates must be suitably primed (eg, metal etch prime). Painted surfaces should be cleaned and lightly sanded to ensure that the priming system achieves a key. Rusted metal will need the rust treated before the application of a suitable metal etch primer.

### CONCRETE/REINFORCED & PRESTRESSED FLOOR SYSTEMS:

When used to waterproof concrete floor systems and any new non wet area concrete slab, it should be noted that new concrete slabs, especially in high rise floor systems, experience shrinkage cracking. The level of cracking is determined by several factors associated with the concrete mix and construction. Some shrinkage cracking is considered acceptable although, any significant shrinkage cracking will readily rupture in situ membranes. Membranes are not designed to overcome structural faults. Construction engineers can determine the scope of any shrinkage cracking and location on the slab. It is important that such information is at hand before waterproofing begins. In pre determined crack areas, steps need to be taken to overcome the movement of the in situ membrane. This can be done by way of bond breakers or the construction of a concrete expansion system over the area.

RI Gilbert (University of NSW) – 2001, has stated that shrinkage cracks in aggressive environments should not exceed 0.1 – 0.2mm. Concrete surfaces in exposed areas should not exceed 0.3mm. For sheltered interior where concrete is not exposed, 0.5mm or larger may be acceptable.

Ultra Flex Traffic will contain shrinkage cracks to 0.3mm but variation within crack size may occur so caution should be exercised remembering that shrinkage cracks are engineered construction faults. The photo shows a chased crack being sealed with polyurethane sealant.



**Flexural Cracking:** These cracks are caused by engineered design structural faults and will readily shear most membranes. In proper design, expansion joints/stress relievers are inserted in the area where a flexural crack will develop (engineers can calculate this). In these circumstances, the application of Ultra Flex is suitable.

**Mature Concrete / Slabs:** Concrete shrinkage as well as flexural cracks develop early following construction and once the drying process is complete; perhaps up to several years, shrinkage cracks do not develop any further. In these circumstances Ultra Flex will hold shrinkage cracks up to 1.0mm providing the proper preparation of the concrete is undertaken and no substrate movement occurs. It is however recommended that where shrinkage cracks approach 1mm or more, that these be treated prior to the application of the membrane.

Ultra Flex Traffic, like all other membranes, is not a cure for bad construction engineering and applicators are warned when undertaking such jobs, that they understand some of the potential issues which may arise.

#### **SUBSTRATE PRIMING:**

Prime concrete using a good quality two-pack, waterbased epoxy. No single pack primer is suitable for trafficable membrane applications. For other substrates please refer to the manufacturer for specific priming requirements.

#### **PRIMING OVER SILICONE:**

Where the silicone is the type suitable for painting, prime directly over it. Where it is not and adhesion is a problem, coat the silicone with 'No More' and prime over the top, before applying the membrane.

#### **WORKING OVER SOLVENT BASED SEALANTS:**

Never apply any waterbased membrane over a non cured, solvent based sealant such as Sikaflex. Doing so will result in the failure of the membrane over the sealant. Ensure that all solvent preparatory materials are fully cured before over coating with Ultra Flex Traffic. The use of bond breaking tapes is recommended.

#### **SUBSTRATES:**

Concrete, new (green) concrete will need to be primed with Sealpoxy, waterbased epoxy primer (or any other good quality waterbased epoxy) after the laitance has been removed. Old concrete will need to be treated (shot blasting, scabbling / diamond grinding or degreasing / high pressure wash etc), before a priming system is applied. We recommend two-pack, water based epoxy primers only. For priming over \*wood surfaces, use a suitable wood priming system and apply the Ultra Flex Traffic within the application window. All steel surfaces

must have all traces of rust treated and then be primed with a suitable metal etch primer. For most surfaces, the two-pack epoxy primer will suffice. For specific substrate preparation, contact the distributor listed overleaf.

\*Excludes particle board - applying the membrane system over particle board will void the warranty.

IF IN DOUBT, TEST ADHERE BEFORE UNDERTAKING THE APPLICATION.

#### **PRODUCT COVERAGE:**

Reinforced: 1.5 litres per m<sup>2</sup> in two coats. Reinforced with fibreglass sheeting: 2 to 2.5 litres per m<sup>2</sup> in 2 to 3 coats.

#### **TORCH ON MEMBRANES:**

It is not recommended to apply any membrane over torch on membranes. We know of no fail proof priming system for this substrate.

#### **PRODUCT APPLICATION GENERAL:**

Gently stir. Do not allow bubbles to form in the pail. Product can be applied by roller or by brush. At least two coats are required to achieve the necessary dry film thickness. Recoat up to 4 hours at 25°C. The required final dry film coat thickness is 750 microns to 1mm utilising 1.5 litres of product per m<sup>2</sup>. Thicker applications can be undertaken.



Figure 1 Applying epoxy primer

Joins, gaps, expansion joints, cracks and holes should be filled and sealed with the repair being allowed to dry before 50mm bond breaking tape is applied.

When using reinforcing, the reinforcing fibre mesh should be embedded in the first coat of Ultra Flex Traffic which should be applied at the rate of 1 litre per m<sup>2</sup>. Ensure all wrinkles in the mesh are levelled out and the mesh is saturated with the product. Apply the second coat as a flood coat ensuring that all mesh has been covered. Apply a third coat in the desired final coat colour. The volume application requirement is 2 to 2.5 litres per m<sup>2</sup>. Allow 7 days curing before vehicular traffic is allowed on the coating.

**PRODUCT COVERAGE:**

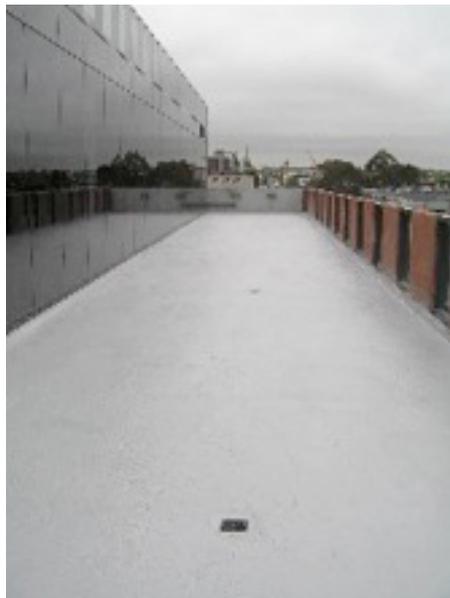
Reinforced: 1.5 litres per m2 in two coats. Reinforced with fibreglass sheeting: 2 to 2.5 litres per m2 in 2 to 3 coats.

**DRYING TIME:**

Average drying time is between 1 and 2 hours at 25°C per normal coat and up to 48 hours if flood coated. Normal coats cure within 48 hours at 25°C and the product achieves water resistance 15 to 24 hours following application.

**MEMBRANE MAINTENANCE:**

Ultra Flex Traffic membranes used externally should be serviced every 8 years in order to ensure overall long life of the membrane. Following the membrane’s inspection by representatives of Resinflow, the membrane warranty is extended a further 8 years.



Smooth Surfaces such as FC Sheeting may require key-ing prior to application if a non penetrative primer is used. Surfaces that are subject to heat/solar induced vapour may cause the membrane to bubble and should first be coated with a suitable primer such as Sealpoxy, two-part epoxy primer.

Metal Surfaces need to be cleaned, rust treated and primed with a suitable metal etch primer.

**PRIMING OVER POLYURETHANE SEALANTS:**

Where polyurethane sealants are solvent based, it is critical to ensure that the sealant cures before any overcoating with Ultra Flex. The expelling solvent from the polyurethane will interfere with non cured waterbased primers and waterbased membranes resulting in possible cracking along the bead line. An alternative sealant that can be used safely is Neutral Cure Silicone.

**POOLING WATER:**

Ensure that no water pooling over the membranes occurs within 5 to 7 days of the application. If substrate falls are suspect, applicators should arrange rectification before applying the membrane as waterbased membranes are not designed to carry pooling water long term.

**DRYING TIME:**

Average drying time is 1 to 2 hours at 25°C in low humidity.

Damp surfaces, low ventilation and cooler weather will increase drying times. The use of fans in internal situations accelerates the drying process.

**PRODUCT STORAGE:**

Ultra Flex Traffic can be stored for up to 18 months in sealed containers out of direct sunlight.

**CLEAN UP:**

Equipment and minor spills can be cleaned with water if still wet. Cured product should be cleaned with a solvent.

**PACKAGING:**

Ultra Flex Traffic is available in 15 litre pails.

**PRECAUTIONS:**

Ultra Flex Traffic is a safe waterbased product, however; avoid contact with the skin and eyes. If poisoning occurs, contact a doctor or the Poison Information Centre on 131 126. Do not induce vomiting. Give water to drink. The use of gloves and eye protection is always recommended.

**SHELF LIFE:**

18 months in a cool dark environment.

Clean Up:	Water
Flash Point :	Not Applicable.
Application Temperature Range:	8 to 45°C.
Viscosity:	4000 (cps)
Dilution:	Nil.

**VOC CONTENT CERTIFICATION:**

Test Method: SCAQMD Method 304-91 Determination of Volatile Organic Compounds (VOC) in Various Materials as referenced by South Coast Air Quality Management Division (SCAQMD) Rule 1168.

## TEST DATA:

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## TEST DATA:

Specification Green Building Council of Australia Green Star Office Design V2 IEQ-13 Green Star Office Interiors V1.1 IEQ-11 Ultra Flex 210 grams per Litre.

Specification Green Building Council of Australia Green Star Office Design V3 IEQ-13 Ultra Flex 210 grams per Litre. Architectural Sealant 250 grams per Litre.

## STORAGE:

The product can be stored unopened in a dry cool area for up to 18 months. Do not allow the product to freeze.

## WARRANTY:

- As an external trafficable membrane – 8 years plus 8 years with maintenance.
- As an external trafficable membrane with Resinflow's 2 pack urethane top plus aggregate – 20 years.

## PRIMERS FOR TRAFFICABLE MEMBRANES:

- Sealpoxy – Waterbased two-pack epoxy suitable for waterproofing priming, sealing
- Hydro Static Epoxy – High quality two-pack waterbased epoxy, for use in all areas of waterproofing and general priming as well as tanking and negative pressure applications.

For external trafficable applications of Ultra Flex Traffic, only supports the product guarantee if either the Sealpoxy or Hydro Static Epoxy primers are used. Single pack primers lack the strength to be suitable for any trafficable coating.

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