

DUROFLEX™ 1K

ONE COMPONENT, FLEXIBLE, CEMENTITIOUS FIBRE REINFORCED WATER PROOF MEMBRANE



DESCRIPTION

DUROFLEX™ 1K is a one-component, flexible, fibre reinforced waterproof membrane. With a specially formulated cementitious base incorporating graded aggregates and polymers, producing a highly flexible waterproof membrane – capable of withstanding significant flexural strain. DUROFLEX™ 1K is suitable for both positive and negative hydrostatic pressure – up to 25 metre head of water pressure (250 kPa).

FEATURES

- Easy to apply by brush/roller or spray.
- Can be applied on damp surfaces.
- High adhesion strength.
- Versatile mixing ratio
- Good crack bridging

USE AREA

- A highly flexible waterproofing membrane for applications such as planter boxes and retaining walls.
- A highly flexible waterproofing membrane for under tiles or other wearing systems, including: rooftops, external balconies and podium levels – when installed to AS/NZ 4654.2
- Waterproof protection of concrete shelves
- Suitable for use in concrete swimming pools (DUROMIX™ HIBUILD WBE primer to be used prior to applying membrane)
- In situations subject to both positive and negative hydrostatic pressure up to 25 metre head of water pressure (250 kPa)
- For use over cement redressed masonry, fibre cement (FC) sheeting, concrete, water resistant plasterboard and structural plywood

TECHNICAL INFORMATION

Appearance	Light grey ready-mixed waterproofing product – requires only water addition.
Apparent Volumetric Mass	1.0 kg/dm ³
Shelf Life	12 months in the original packaging in dry environment
Pack Mixing water Viscosity	20 kg bags ≈ 5 – 7 / per 20 kg bag 66,000 mPas sec
Specific Weight of the Mixture	≈ 1.5 kg/dm ³
Pot Life	≥ 1 hr
Temperature Range for Application	+5 °C to +35 °C
Substrate Residual Humidity	≤ 4%
Minimum Total Thickness	≥ 2 mm
Maximum Thickness per Layer	≤ 1,5 mm
Waiting Time Between 1st & 2nd Coat	≥ 6 Hours
Waiting time before laying the covering	≥ 24 hrs
Interval before normal use	≈ 7 days / ≈ 14 days (permanent water)
Working temperature	-20 °C to +90 °C
Coverage with trowel application	≈ 1.20 kg/m per mm of thickness
Coverage with brush application	≈ 1.15 kg/m per mm of thickness
Coverage with roller application	≈ 1.10 kg/m per mm of thickness



FLOORING APPLICATION PERFORMANCE

VOC INDOOR AIR QUALITY (IAQ) - VOLATILE ORGANIC COMPOUND EMISSIONS

Conformity

EC 1-R plus

HIGH-TECH

Initial adhesion	$\geq 2 \text{ N/mm}^2$	EN 14891-ISO 13007-5
Adhesion after contact with water	$\geq 1 \text{ N/mm}^2$	EN 14891-ISO 13007-5
Adhesion after heat ageing	$\geq 2 \text{ N/mm}^2$	EN 14891-ISO 13007-5
adhesion after freeze-thaw cycles	$\geq 1 \text{ N/mm}^2$	EN 14891-ISO 13007-5
Adhesion on contact with lime water	$\geq 1.5 \text{ N/mm}^2$	EN 14891-ISO 13007-5
Adhesion on contact with chlorinated water	$\geq 0.8 \text{ N/mm}^2$	EN 14891-ISO 13007-5
Water-resistance	no penetration	EN 14891-ISO 13007-5
Coefficient of resistance to water vapor diffusion (μ)	≤ 875	EN 14891-ISO 13007-5
Crack Bridging in standard conditions	$\geq 0.75 \text{ mm}$	EN 14891-ISO 13007-5
Crack Bridging at low temperatures (-5 °C)	$\geq 0.75 \text{ mm}$	EN 14891-ISO 13007-5
Bond Strength	2.1 MPa ²	EN 14891-ISO 13007-5
E-modulus	17.2 u/mm ²	EN 14891-ISO 13007-5
Conformity	CM O1P	EN 14891-ISO 13007-5

All values taken at +23 °C, 50% R.H. and no ventilation.

APPLICATION SURFACE PREPARATION

Ensure all surfaces are cleaned by blast cleaning, high water pressure (6000 psi), wire-brushing, grinding and abrading of ceramic tiles etc., in order to remove all previous coatings, or any and all traces of grease, rust, release agents, cement laitance and any other material which could reduce adhesion. All dust deposits from this preparation must also be removed i.e. by vacuum. Ensure that the substrate is adequately dampened prior to application of DUROFLEX™ 1K. New concrete and render must have cured for a minimum of 28 days.

For good adhesion strength and performances, DUROFLEX™ 1K should be applied by trowel, this achieves good coverage and consistency throughout application.

CONCRETE AND MASONRY SUBSTRATES:

Please note cracks that do not move or continue to spread (Static cracks) up to 2mm in width must be treated and filled with DUROSEAL™ HYBRID sealant. If there are static cracks that are greater than 2mm but less than 4mm in width, they must also be filled with DUROSEAL™ HYBRID sealant. For cracks GREATER than 4mm, use DUROTECH™ RAPID PATCH to fill. Cracks that are greater than 2mm that are subject to movement must be referred to the builder or engineer for structural assessment and method of rectification to perform as an expansion joint.

DO NOT INSTALL IF CRACKS ARE LIVE AND SUBJECT TO MOVEMENT.

All floor and wall sheets must be installed following sheet manufacturers specifications. Internal and external sheet floor systems, that are suitable for wet area applications, require sealant/adhesive application to seal sheet joints at the time of installation in order to comply with manufacturer's instructions.

Floor sheet joints that use polyurethane sealants at installations must be cured for a minimum of 7 days prior to the application of the membrane.

All sheet joints must be isolated from the membrane by DUROTECH™ FLASHING TAPE SELF ADHESIVE as a bond breaker tape that covers the entire width & length of the sheet joints.

As floor sheet joints are more prone to movement over joist supports, apply an extra 1000micron (1.0mm) wet coat extending a minimum 35mm either side of DUROTECH™ FLASHING TAPE SELF ADHESIVE. A further 2 coats at 1000 microns (1.0mm) each wet coat must be applied over the entire area to be waterproofed.

EXPANSION JOINTS

Expansion joints must be a minimum of 6mm. Ensure expansion joints are isolated from membrane using DUROTECH™ FLASHING TAPE SELF ADHESIVE or DUROFABRIC™ JOINT SEAL TAPE that covers the entire width and length of the joint. An extra 1000micron (1.0mm) wet coat that extends a minimum of 35mm either side of the DUROTECH™ FLASHING TAPE SELF ADHESIVE or DUROFABRIC™ JOINT SEAL TAPE must be applied as an extra coat.

A further 2 coats at 1000 microns (1.0mm) each wet coat must be applied over the entire area to be waterproofed.

PRIMING

Porous substrate:

Adequately dampen substrate prior to application and ensure surface is damp but not wet.

Non-Porous substrate:

Mechanical abrasion such as sanding or grinding is required. Once complete pre-soak or dampen the surface. For non-porous substrates such as steel or plastics consult Durotech's technical department 1300 434 272. Allow 2- 4 hrs drying time between coats depending on ambient conditions.

MIXING

DUROFLEX™ 1K is a 1 part cementitious powder product, which requires the addition and mixing of water. The water ratio can be adjusted in order to obtain your desired consistency and workability for the desired application.

IF APPLICATION IS BY ROLLER OR SPRAY – mixing requirements are 7.6 litres of water per 20kg bag.

IF APPLICATION IS BY BRUSH – mixing requirements are 6.5 litres of water per 20kg bag

IF APPLICATION IS BY TROWEL – mixing requirements are 5.2-5.6 litres of water per 20kg bag.

Add powder into the water while mixing with a mechanically powered high shear stirrer. Always add powder to liquid to avoid lumps & incomplete mixing. Continue mixing until uniform and a lump free state is acquired. **DO NOT MIX BY HAND.**

APPLICATION NOTES

- DUROFLEX™ 1K is a 2 COAT SYSTEM
- It can be applied by brush, roller, spray or trowel
- Each coat must be applied at a uniform thickness of 1000microns (1.0mm) - 2 coats to achieve a wet film thickness of 2.0mm
- DO NOT APPLY IN THICKNESS GREATER THAN 2.0mm PER COAT
- A wet film gauge should be used to regulate adequate coverage of each coat
- This TDS and it's instructions may not be suitable for every application, this is a guide to assist in meeting the installation requirements of AS/NZ 3740 & AS/NZ 4654.2, we recommend that the application be carried out by a licensed professional holding a certificate 3 in waterproofing

RECOATING

Allow first coat to dry which may take 30-60 minutes depending on surface porosity and ambient conditions. Once touch dry apply second coat at right angles to the first coat, repeating the uniform thickness of 1000microns (1.0mm thickness). Subsequent coats can be applied if required.

IMPORTANT NOTES

- Must not be installed directly onto wet, contaminated or friable surfaces
- Min dry film thickness (after 2 coats) is 1.0mm
- Check regularly with a wet film gauge during application of coats
- DO NOT apply in temperatures greater than 35 °C or 5 °C. As cold or damp conditions will adversely affect curing
- When used in areas subject to ambient conditions below freezing temperatures you must contact technical department of Durotech Industries 1300 434 272
- This membrane is suitable for use in an exposed finish or as a top coating exterior membrane on surfaces that are subject to light pedestrian or maintenance traffic only
- All AS 4654.2 external membrane applications covered with a reinforced tile bed or screed must be separated from the membrane by a minimum of 1 layer of 200um plastic sheet as a separation layer in accordance with AS 3958.1-3.3.2.3
- The installation of protection board against ballast, such as river pebbles or similar loose laid unbound coverings, must be isolated from the membrane by a compatible drainage cell and filter fabric system
- Must not be applied over lightweight concrete

PAINTABILITY

DUROFLEX™ 1K is paintable – refer to the paint suppliers recommendations.

STORAGE AND SHELF LIFE

12 months when stored unopened in temperatures between 5 °C and 35 °C. Protect from excessive heat, direct sunlight and freeze/thaw.

CLEANING

Warm soapy water will remove product from tools and equipment prior to full cure.

SHELF LIFE

12 months in unopened containers when stored in a cool dry and weatherproof environment

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