

PRODUCT DESCRIPTION

TREMproof 90 is a two-component, liquid applied membrane designed to be used under tile and vinyl flooring, for internal wet area waterproofing areas. TREMproof 90 is a flexible, fast drying, low odour waterproofing membrane with fibre reinforcement for increased wet film thickness.

USAGE/PURPOSE

Typical applications for TREMproof 90 include:

- Bathrooms
- Showers
- Other internal tiled/vinyl areas

FEATURES & BENEFITS

- Tested to AS 4858, materials requirement for internal wet area membrane as required by AS 3740 and the National Construction Code of Australia.
- Long history in Australia helps builders rest easy knowing that they are using proven products that are fit for purpose.
- Ability to adhere tiles directly to the membrane allows for maximum design flexibility.
- Low Odour makes using TREMproof 90 more contractor friendly, especially when applying in low air flow areas like internal bathrooms.

PACKAGING

30L Kit; Part A: 2 x 10kg Powder; Part B: 20L Liquid

COLOUR

Grey/Green

SHELF LIFE

12 months when stored as recommended in original unopened packaging.

STORAGE

Store in a dry, cool place in an upright position in original unopened packaging.

LIMITATIONS

- Not to be used as a trafficable or UV stable waterproof membrane.
- Not to be used below grade.
- The surface temperature for product application should be between 10°C - 30°C. The curing process will slow down substantially when substrate or ambient temperatures are below 10°C or where relative humidity is >85%.



SUBSTRATE PREPARATION FOR CONCRETE SURFACES

1. Concrete shall be water-cured and attain a 20 MPa minimum compressive strength. Moisture content in the concrete shall be lower than 4.5%, as measured using a Tramex CME Moisture Meter. Where the moisture content is 4.5% or above, a minimum of 2x coats of TREMproof 200EC primer will be required. Depending on concrete construction and job site location, additional concrete testing may be required. Please contact your local Tremco Representative.
2. Concrete shall be free of any laitance which may inhibit adhesion. Removal of laitance can be achieved through a variety of physical abrasion methods, such as shot blasting (preferred method), sandblasting or grinding. Where a physical abrasion method has been used, a minimum of 2x coats a suitable Tremco CPG Australia primer shall be applied.
3. Surfaces shall be made free of defects that may telegraph and show through the finished coating. All 90° transitions shall be modified to 45°, to eliminate sharp edges/corners. Surfaces that are rough (fins, ridges, exposed aggregate, honeycombs, deep broom finish, etc.) shall be levelled and made smooth by applying a coat of sand-filled epoxy using TREMprime EP.
4. Concrete surface shall be properly cleaned so that the surface to receive the coating, sealant or liquid-applied flashing is free of mould, paint, sealers, coatings, curing agents, loose particles, and other contamination or foreign matter that may interfere with the adhesion.
5. In the event of exposed reinforcing steel, it is recommended that the structural engineer of record be contacted for investigation and for best repair method.
6. Spalled areas shall be cleaned free of loose contaminants prior to repair. Because jobsite conditions vary, it is recommended that you

TYPICAL PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TREMproof 90
Pot Life @ 23°C, 50% RH	ASTM D1640	2 - 3 hours
Drying Time @ 23°C, 50% RH	ASTM D1640	2 - 4 hours
Full Cure Time @ 23°C, 50% RH	ASTM D1640	48 hours
% Solids	By Volume	75%
Cyclic Movement	CSIRO Moving Joint Test	Pass
Elongation at Break	AS/NZS 4858	295%
Heat Ageing	AS/NZS 4858	1.54MPa, 260% Elongation
Durability	AS 4858 Appendix A	Pass#
Water Absorption	AS3558.1	2%
Water Vapour Transmission Rate	ASTM E96	3.56 g/m ² /24hours

* Drying times will vary depending on ambient temperature and relative humidity

Consult Tremco Technical Services

TREMproof 90

Two Component, Liquid Applied Membrane for Internal Wet Area Waterproofing

contact your local Tremco Representative. Depending on the substrate and depth of the spalled areas, a EUCOcrete repair product will be recommended as the best method of repair.

7. Shrinkage cracks in the concrete surface that are 1.6mm wide or greater shall be ground out to a minimum 6mm wide x 12mm deep and treated according to the instructions in 'Detail Work' section.
8. Structural cracks regardless of width shall be ground out to a minimum 6mm wide x 12mm deep and treated according to the instructions in 'Detail Work' section.
9. All drains shall be cleaned and operative. Drains shall be recessed lower than the deck surface. The surface shall be sloped to a drainage point to provide positive drainage (refer to the relevant Australian Standards/NCC for required fall). Drains should be detailed as instructed below:
 - Cut a 6mm wide x 12mm deep keyway into the concrete surface at any point where the coating will have an exposed terminating edge - that is, any point where the coating will end in an open area subject to traffic, for example, at the end of a ramp, around drains and alongside expansion joints.
10. If the project is a restoration deck, old sealant and membrane material shall be removed. The joint interface will require a thorough wire brushing, grinding, sandblasting, solvent washing and/or primer.

SUBSTRATE PREPARATION FOR METAL SURFACES

All surfaces shall be sand-blasted to meet the requirements in AS1627.4, class 2.5 for "Near White Metal".

JOBSITE MATERIALS

Recommended materials and their uses are as follows:

- ❑ TREMproof WB Primer: A one-part, film-forming primer to be used on porous surfaces.
- ❑ TREMprime EP: A 100% solids, two component epoxy primer recommended for use on porous substrates (concrete, brick, stone) and also as a compatible tie-in coat to create connectivity between otherwise incompatible membranes.
- ❑ TREMproof 200EC: A low-VOC, two-part, water based epoxy primer for use on porous substrates, such as wood and concrete to provide a vapour retarder. Also can be used on concrete based substrates to provide an efflorescence barrier.
- ❑ TREMprime Non-Porous Primer: A low-VOC primer for use in applying urethanes to non-porous substrates such as metal, PVC and glass.
- ❑ Dymonic 100: A one-part, exceptional movement (+100/-50%) moisture curing, gun grade polyurethane sealant for use in precast, masonry, expansion joints, control joints and for use in forming cant/fillet bead.
- ❑ TREMflex 50: A one-part, high movement (+/-50%) moisture curing, gun grade polyurethane sealant for use in precast, masonry, control joints and for use in forming cant/fillet bead.

USAGE

The following is a guide to estimate material usage:

Coverage Rate		Thickness (Per Coat)	
1m ² /L	30m ² /30L Kit	1.0 mm WFT	0.75 mm DFT

*All coverage rates are approximate & vary with substrate condition.

PRIMING

Note: Do not apply primers, sealant or membranes to a frosty, damp or wet surface or when substrate temperature is below 4°C or the surface temperature is above 43°C. Cure times as stated below are based upon standard ambient conditions of 23°C, 50% RH. A decrease in ambient temperature and humidity will significantly lengthen the cure time.

1. TREMproof 90 requires the use of an appropriate primer on porous substrates. Please refer to appropriate product data sheet regarding application instructions for the various primers.
 - Where a vapour retarding primer is not necessary, use TREMproof WB primer.

- If a vapour retarding primer is needed, use TREMproof 200EC primer depending on site conditions and requirements of the project.
- TREMproof 90 requires TREMprime Non-Porous Primer on metal and PVC surfaces, such as puddle flanges or flashing.

CRACK PREPARATION

- ❑ Shrinkage cracks in the concrete < 2mm wide nominally can be detailed with a 150mm wide x 1mm WFT strip of TREMproof 90.
- ❑ Shrinkage and non-structural cracks >2mm wide must be appropriately prepared and filled prior to application of the TREMproof 90 membrane.
 - Grind out cracks to a minimal 6mm wide x 12mm deep.
 - Remove all loose debris and concrete dust that may inhibit adhesion.
 - Apply closed cell polyethylene backer rod or bond breaker tape into joint to prevent 3 sided adhesion of the sealant.
 - Install appropriate Tremco polyurethane sealant, TREMflex 50 or Dymonic 100 into the crack in the correct depth to width ratio.
 - Apply a 150mm wide x 1mm WFT strip of TREMproof 90 unreinforced.

JOINT PREPARATION

- ❑ All joints must be clean, sound, dry, and free of dirt, grease, oil, release agents and other contaminants.
- ❑ All floor to wall and hob to wall joints must have a 35mm wide bond breaker sealant of Tremco's TREMflex 50 or Dymonic 100 prior to installation of the TREMproof 90 membrane.
- ❑ All expansion and movement joints should be treated with the appropriate Tremco sealant, TREMflex 50 or Dymonic 100, based on joint expected movement requirements, and applied to the correct width to depth ratio (2:1). A closed cell polyethylene bond breaker tape must be used prior to sealant installation to prevent 3 sided adhesion.
 - If the joint is expected to expand to a full width > 50mm, Tremco's Dualflex or Hypaflex membrane will be needed in lieu of sealant.
- ❑ When tiling over joints, Tremco highly encourages that the joint is expressed through to the surface of the tiles. Between the tiles, fill the joint with the appropriate Tremco joint sealant. Depending on the tile composition, polyurethane or silicone sealant may be recommended. Contact Tremco for further assistance.

METHOD OF MIXING

- ❑ TREMproof 90 consists of two components, Part A powder and Part B liquid.
- ❑ Only mix what can be applied within the pot life. The mixing ration is 1:1, so 10kg of powder to 10L of liquid. Always add powder to the liquid to avoid lumps of dry powder.
- ❑ If pouring into a secondary container, pour the Part B (liquid) into a clean suitable mixing vessel i.e. pail.
- ❑ Gradually add the Part A into the Part B while mixing with a low speed paddle mixer until a smooth lump free mixture is obtained.
- ❑ Do not remix with additional liquid.

METHOD OF APPLICATION

1. Minimum application requirements set forth by the NCC and relevant standard (AS 3740) should be followed, as well as project specific detail requirements/recommendations by Tremco.
2. Using a medium-nap (9mm to 13mm) roller cover, apply TREMproof 90 at the following rates to the entire area to be coated, including over applications of TREMproof 90 detail coats, but excluding expansion joints.

Where being used as a waterproof membrane, as per the requirements of the NCC and relevant Australian Standard, Tremco recommends two coats at the following application rates.

Application Coat	Coverage Rate	Thickness (Per Coat)	
Waterproof Coat 1	1m ² /L	1.0 mm WFT	0.75 mm DFT
Waterproof Coat 2	1m ² /L	1.0 mm WFT	0.75 mm DFT

Where being used as a water resistant coating, surplus to the requirements of the NCC and relevant Australian Standard, Tremco recommends one coat at the following application rate.

Application Coat	Coverage Rate	Thickness (Per Coat)	
Water Resistant Coat	1m ² /L	1.0 mm WFT	0.75 mm DFT

- Allow TREMproof 90 to cure a minimum of 2 - 4 hours between coats to reduce the risk of moisture entrapment between coats. Cure rates depend on temperature and humidity.
- TREMproof 90 may be flood tested and or direct stick tiled after membrane has fully cured, which is generally 48 hours after final coat has been applied. Drying times may vary dependent on ambient temperature.

CLEAN UP

- Clean all adjacent areas to remove any stains or spills with water.
- Clean tools or equipment with water before materials cure.
- Clean hands by soaking in hot, soapy water, then brush with a stiff-bristle brush.

TROUBLESHOOTING

This section describes common industry application issues when certain environmental conditions exist and their remedies. If any of these should occur, it is always recommended that you contact your local Tremco Representative

- When a deck contains too much moisture, the moisture may change into a vapour, which then condenses at the concrete/membrane interface before the coating has cured and may cause blisters or bubbles, ultimately interfering with proper adhesion. If this should occur, the blisters can be cut out, allowing moisture to escape. After moisture has escaped and the surface is dry, the area can be repaired.
- If the coating application has been installed at a thickness that is greater than our installation instructions, dry times could be extended significantly. As a result, Tremco recommends that the material is applied in accordance with the installation instructions.
- If the coating is applied in very hot ambient temperatures, the air in the small spaces between the concrete particles increases in volume and forms blisters. Contact Tremco should this occur.
- If the previous coating application has not fully cured, water may become trapped between the coats and lead to large blisters. When cut out, they may still be tacky on the underside. Blisters may be cut out and repaired after the surface has been allowed to fully dry. Also, additional application will dramatically reduce the rate the material cures and full cure will take dramatically longer than normal.

WEATHER IMPACT ON COATING APPLICATION

This section discusses the impact of applying these coatings outside the ideal temperature application range of 18 to 30°C at 50% RH.

- At temperatures lower than the ideal range, the material will become viscous and it will cure at a slower rate.
- Storing materials at cooler or warmer temperatures than ideal will affect the handling and curing characteristics of the materials.
- Substrate temperatures may affect cure rates even when ambient temperatures are high.
- Enclosed areas may slow the cure rate of the coating because air flow tends to be minimal in these areas.
- In high relative humidity conditions, even when temperatures are high, cure rates can still be extended.

HEALTH & SAFETY PRECAUTIONS

The Safety Data Sheet (SDS) must be read and understood prior to use.

TECHNICAL SERVICE

Tremco CPG Australia Pty Ltd has a team of Representatives who provide assistance in the selection and specification of products. For more detailed information or service and advice, call Customer Service on (02) 9638 2755 or fax (02) 9638 2955.

GUARANTEE/WARRANTY

TREMCO products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with TREMCO written instructions and (b) in any application recommended by TREMCO, but which is proved to be defective, will be replaced free of charge. Any information provided by TREMCO in this document in relation to TREMCO's goods or their use is given in good faith and is believed by TREMCO to be appropriate and reliable. However, the information is provided as a guide only, as the actual use and application will vary with application conditions which are beyond our control. TREMCO makes no representation, guarantee or warranty relating to the accuracy or reliability of the information and assumes no obligation or liability in connection with the information. To the extent permitted by law, all warranties, expressed or implied are excluded.

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