Keratrade

WPM Plus

Class III waterproofing membrane

Certified, eco-friendly, organic, rapid drying water based polyurethane, membrane system for substrates in damp environments.



TDS
TECHNICAL DATA SHEET

Uses: Internal / External
Coverage: 15m^2 (2 coats)
Between coats: 1-2 hrs
Before tiling: 6 hrs after 2nd coat
Flood Test: 24 Hrs
Work time: 30min@25°C
Clean Up: water
App Temp: 10-35°C
VOC Rating: <1g/L (US RULE 1168)
Size: 19.5 KG

XTecGen
CERTIFIED CLASS III MEMBRANE
AS/NZS4858 / AS4654.1

Keratrade WPM Plus: All-in-One Rapid Drying Water-Based Membrane TechnicalAdvantages:

- Class 3 High Elasticity: Exceptional flexibility and performance.
- Rapid Drying: Ready for recoating within1-2 hours at 22°C and 50% RH.
- Flood Test Ready: Suitable for flood testing after 24 hours under the same conditions.
- Quick Tiling: Tiles can be applied after 4-6 hours in non-critical areas at 22°C and 50% RH.
- Easy Application: Can be applied using a brush or roller.
- Tiling Compatibility:Compatible with Keratrade or Kerakoll tile adhesive systems.
- Versatile Use: Ideal for both commercial and residential projects.
- Excellent Adhesion: Adheres strongly to concrete, rendered masonry, wet area plasterboard, FC sheets, and plywood.
- Damp Substrate Application: Can be applied to damp surfaces, provided there is no free surface water and primed with Keratrade Keraseal or Kerashield.

DESCRIPTION

Keratrade WPM Plus is a single-component, rapid-drying, water-based polyurethane Class 3 waterproofing membrane system. It meets the requirements of AS 3740 and complies with AS/NZS 4858 standards. This membrane can be used on graded substrates with positive falls to drainage outlets, swimming pools, planter boxes and exposed roof tops. It is compatible with Kerakoll and Keratrade tile adhesives.
Keratrade WPM Plus is a two-coat waterproofing system, designed for application over both porous and non-porous substrates when primed.

Uses:

- Internal Wet Areas: Ideal as a waterproofing membrane under tile for showers, bathrooms, kitchens, laundries, and toilets, when installed according to AS/NZS3740.
- External Surfaces: Suitable for use under tile or other wearing surfaces on external balconies, rooftops, and podium levels, installed per AS/NZS 4654.2.
- Exposed Membrane: Can be used as an exposed waterproofing membrane for external applications subject to light pedestrian traffic.
- Substrate Compatibility: Effective on concrete, cement-rendered masonry, FC sheeting, water-resistant plasterboard, and structural plywood (Type A Stamped PAAJAS-ANZ to AS/NZS2269-2004).
- Contains root inhibitor and provides reliable waterproofing for planter boxes and retaining walls.
- Swimming Pools: Suitable for waterproofing swimming pools when covered with tiles.

PRODUCT CHARACTERISTICS

Colour: Light grey
Appearanc: Brush/roller grade smooth paste

Product Performance Data
Specific Gravity: Approx. 1.3 kg/L
Volume Solid: Approx. 70%
Crack Bridging: Pass (2mm)
Flammability: Non-flammable
Membrane Class: Class 3
Minimum Dry Film Thickness:

- 0.6mm (water-resistant) to 0.9mm (waterproof) after 2 coats
- 0.9mm minimum for pool lining

Drying Time per Coat: 1-2 hours at 22°C / 50% RH (minimum of 2 coats)
Dry Time for Following Trades: 4-6 hours at 22°C / 50% RH
Shore A Hardness: Approx. 70
Moisture Vapour Transmission Rate: 1.20 grams/m²/24 hours
Tensile Strength: >2.0 MPa
Elongation: >300%

Using Keratrade WPM Plus
Please read and understand the Safety Data Sheet (SDS) before using this product. The SDS can be accessed by visiting www.buildgreen.au.

SURFACE PREPARATION

Precautions: Read all precautions before applying any component of the membrane system.

Acceptance of Substrate: Commencement of the membrane system installation indicates acceptance of the substrate's suitability and preparation by the applicator.

Surface Condition: Ensure that all substrates are structurally sound, clean, dry, or damp, with no free surface water. The surface must be smooth, free of voids, protrusions, oils, grease, curing compounds, coatings, adhesive residues, and uncontaminated by preceding trade activities. Composite Substrates: Verify that all composite substrates, such as wall and floor sheets, are fully supported and installed according to the manufacturer's instructions.

Priming:
Porous Substrates: Apply Kerakoll or Keratrade porous primer.
Non-Porous Substrates: Apply Kerakoll or Keratrade non-porous primer ensure proper surface preparation through mechanical abrasion if needed.

Particleboard: For platform floor sheeting (particularly particleboard), check the manufacturer's specifications for suitability in wet area applications and ensure that protective coatings do not impair membrane adhesion.

Curing Times:
New concrete and render must cure for at least 28 days.
Sand and cement screeds and polymer-modified renders must cure for at least 7 days.

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Store the product securely, and check with your local council regarding the disposal of contents. Disposeofpackagingthoughtfully and recycle where possible. Keep out of reach of children. If you feel unwell, consult a doctor.
For more information, refer to the Safety Data Sheet (SDS) available at www.buildgreen.au
GUARANTEE
BuildGreen guarantees that Keratrade Products are free from manufacturing defects and will meet any applicable specifications published by us for a period of 10 years from the date of purchase. Refer to the BuildGreen Guarantee.
DISCLAIMER
The technical details and recommendations are provided based on the best knowledge at the time. It is the user's responsibility to ensure the correct use and handling of the products in line with applicable Australian Standards.
Users should verify that the product is appropriate for their specific applications and meets system specifications. We reserve the right to change information without prior notice as part of ongoing research and development.

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BOND BREAKER
Keratrade Ultraseal Flex must be applied as a minimum 12mm x 12mm coved bead over the dry primer coat in areas where bond breaker joints are required. Alternatively, Keratrade or Kerakoll bandage may be used.
Key areas include:

- Internal corners
- Changes in direction of substrate planes (e.g., wall/floor, wall/wall)
- Hob/wall junctions
- Pipe penetrations
- Tap bodies
- Water stops
- Drainage outlets

Using Keratrade Ultraseal Flex, Kerakoll / Keratrade, BT Tapes or bandage in these locations helps accommodate movement and preserves the integrity of the waterproofing system.

MEMBRANE PROTECTION
Protection During Application: The membrane should be protected throughout the application process and during the initial 24-hour curing period. Place signs and barriers to deny access to subsequent trades.
Temporary Protection: After curing, secure temporary protection sheets to safeguard the dried membrane from damage by following trades until a protective screed or finished floor system is installed.
Membrane Recoating and/or Repair

RECOATING
The membrane surface must be cleaned of all tile adhesive residue, surface dust, and any contamination or substrate irregularities.
Wash the membrane surface with diluted Sugar Soap, thoroughly rinse it, and allow it to dry before recoating.

REPAIRING
The adjacent membrane must be sound, with a minimum dry film thickness of 0.9mm, fully adhered to the substrate.
Thoroughly clean the membrane of all foreign material, ensuring no cleaning agent residue, dust, or contamination remains.
Exposed porous and non-porous substrates must be correctly prepared, primed, and sealed.
Apply two coats of Keratrade WPM Plus waterproofing membrane as per the coverage instructions.
Ensure the membrane repair overlaps the existing membrane by a minimum of 100mm.
A consistent minimum 0.9mm dry film thickness is required over both previously coated and uncoated repair areas (refer to the "Coverage" table for further details).

PAINTABILITY
Keratrade WPM Plus is paintable with water-based paints. Please refer to the paint supplier's recommendations for compatibility.

COVERAGE
Minimum Two-Coat System: The system requires a minimum of two coats for optimal performance.

COAT THICKNESS:
Each coat must be applied at a minimum rate of 0.5 litres/m² or 500 microns (0.5mm) thick, resulting in a total wet film thickness of 1.0mm after two coats for water resistance.
For waterproofing requirements, each coat must be applied at a minimum of 0.75 litres/m² or 750 microns (0.75mm) thick, resulting in a total wet film thickness of 1.5mm after two coats.

Drying Time Between Coats: Allow 1-2 hours between coats. Colder temperatures or high humidity may extend drying time.

Second Coat Application: The second coat should be applied perpendicular to the first coat for optimal coverage.

Additional Coats: Extra coats may be applied if necessary, at a rate of 500 microns (0.5mm) per coat.

Application Guidelines: Do not thin with water or add fillers.
Wet Film Gauge: Regular use of a wet film gauge during application is recommended to ensure correct wet film thickness per coat.
Required Dry Film Thickness: After two coats, the dry film thickness should be a minimum of 600 microns (0.6mm) for water resistance or 900 microns (0.9mm) for waterproofing.

Coverage per 15 Litre Pail (depending on wastage and site conditions): 10-15m² for two coats.

Application Wet Film Thickness / Dry Film Thickness:
Water Resistant (2 coats):
Wet Film: 1000 microns (1.0mm)
Dry Film: 600 microns (0.6mm)

Waterproof (2 coats):

Wet Film: 1500 microns (1.5mm)

Dry Film: 900 microns (0.9mm)

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APPLICATION METHODS:
This product is formulated for use with brush, roller, trowel, or spray application on both small and large areas.

Wet Film Gauge: A wet film gauge must be used regularly to ensure that the minimum wet film thickness is achieved for each coat.

Vertical Terminations: Ensure that all vertical terminations, including perimeter walls, hobs, and penetrations, are of adequate height to meet the requirements of AS 3740 for internal applications and AS 4654.2 for external applications.

Bond Breaker Application: Apply bond breaker joints to all horizontal/vertical junctions, such as wall/floor, wall/wall, hob/floor, hob/wall, and shower set downs, before applying the membrane.

Flood Testing: Allow 24 hours at 22°C / 50% RH before flood testing the installed system. Ensure that joints and other critical areas are fully dried prior to testing.

Critical areas where the membrane is applied thicker than 1mm wet film or over bond breakers and other impermeable substrates may require longer drying time.

STORAGE & SHELF LIFE
Storage Conditions: Store between 5°C and 30°C. If unopened and stored within these temperature ranges, the product has a shelf life of 12 months.
Protection: Protect from excessive heat, moisture, and freeze/thaw conditions.

CLEANING:
Use warm soapy water to remove Keratrade WPM Plus from tools and equipment before full cure.

IMPORTANT NOTES
Applicability: The instructions in this Technical Data Sheet may not be applicable for every application. They are intended as a guide to assist in meeting the installation requirements of AS 3740 and AS 4654.2.

PROFESSIONAL INSTALLATION: It is recommended that installation be carried out by professional, licensed applicators holding a current Certificate III in Waterproofing.

COMPLIANCE: Installation must comply with AS 3740 (Waterproofing of domestic wet areas) or AS 4654.2 (Waterproofing membranes for external aboveground use), wherever appropriate.

PRECAUTIONS IN USE
One-Part System: This product is a one-part system. Do not dilute with water or any other liquid.

Substrate Requirements: It must not be applied directly on wet (standing water), contaminated, or friable substrates.

Dry Film Thickness: The minimum dry film thickness after two coats should be 0.6mm (water-resistant) to 0.9mm (waterproof).

Wet Film Gauge: Regular checks with a wet film gauge are advised during the application of each coat.

Cold Damp Conditions: Cold, damp conditions will adversely affect application properties and slow the curing rate.

Temperature Restrictions: Do not apply the Keratrade WPM Plus waterproofing membrane when air or substrate temperatures are greater than 35°C or below 5°C.

Freezing Conditions: Special precautions must be taken when installing in areas subject to ambient temperatures below freezing.

External Membrane Application: For AS 4654.2 external membrane applications covered with a reinforced tile bed or screed, a minimum one layer of 200µm plastic sheet must be used as a separation layer, in accordance with AS 3958.1 - 3.3.2.3.

Protection Board and Ballast: Protection board and ballast (e.g., river pebbles or similar loose laid unbound coverings) must be isolated from the membrane by a compatible drainage cell and filter fabric system.

Lightweight Concrete: Keratrade WPM Plus must not be applied directly over lightweight concrete.

Hob Construction: Hobs constructed of autoclaved aerated blocks (e.g., Hebel) must be primed to consolidate and seal the substrate, preventing pinholing of the membrane and ensuring sufficient strength to support tiling.

Block Wall Treatment: Autoclaved aerated block walls must be rendered before the application of the membrane system.

Negative Hydrostatic Pressure: Keratrade WPM Plus is not designed to withstand negative side hydrostatic pressure. Use Keratrade Keraseal or Kerashield as the primer in such cases.

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