

Work Method Statement

Purtop 400M – Polyurea Waterproofing System

Exposed Roofs Decks & Gutters

Product System:	Purtop 400M – Hybrid Polyurea Waterproofing System
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1.1 SCOPE

This Work Method Statement includes the repair mortar, bonded engineered screed, junction detail, primers, waterproofing membrane, and aliphatic topcoat for Trafficable UV stable areas in accordance with the relevant standards, flooring manufacturers guidelines, and as per MAPEI technical data sheets (TDS).

1.2 REFERENCES

- New Zealand Standards(s):**
 - E2/AS1 – External Moisture
 - NZS 3114 – Specification for Concrete Surface Finishes
- MAPEI- MBP(NZ) Ltd Technical Notebook(s):**
 - [Installation of Heated Screeds and Substrates for Laying Floors](#)
 - [Ref: Mapei MBP\(NZ\) Ltd technical datasheets \(\[www.mbpltd.co.nz\]\(http://www.mbpltd.co.nz\)\)](#)
 - [Purtop Systems Technical Manual](#)
- Certifications(s):**
 - EN 1504-9 (Products and Systems for the protection and repair of concrete)**
 - EN 1504-2 (Protection systems for concrete, according to PI, MC, PR, RC, and IR)**
 - ETAG 033 (Membrane for Bridge Decks) certified under asphalt**
 - CEN/TS 14416 (Resistant to plant root penetration)**

1.3 SUBSTRATE PREPARATION

All substrates must be structurally sound, dry, solid, and stable. Any laitance, dust, grease, oil, paint, curing compounds rust or protruding mortar present on the surface of the metal, timber concrete/masonry or bitumen substrate that may inhibit bond or interfere with the application of a consistent film thickness, shall be mechanically removed. The substrate should then be cleaned and prepared in accordance with the relevant standards and as per the MAPEI technical data sheets (TDS).

Suitable Substrates:

- Concrete & Cement Screed
- Timber, Plywood, Compressed sheet, Strand board, Cement board
- Metal with correct primer. See MBP(NZ) Ltd for suitable primer selection.
- Bitumen
- **For DAMP substrates – CONTACT: MBP(NZ) Ltd for the correct solution.**

The information in this Specification is consistent with the information given in the Product Technical Data Sheets (TDS). If further information is required, MBP (NZ) LIMITED recommends referring to the Product TDS, or seeking advice from MBP (NZ) LTD.

The information given in this Specification relating to the application and use of MAPEI products is given in good faith based on MBP (NZ) LIMITED's current knowledge and experience of the product when appropriately stored, handled and applied under recommended conditions as per the information in the Product TDS. In practice, the difference in application conditions, substrates, materials, and site environments are such that no guarantee in respect of consumption or fit for a particular purpose can be concluded either from the information given in this specification, or any other written or verbal recommendations. The Applicator of the product must assess the substrate and the product's suitability for the intended application and final service provision of the product or product system.

1.4 REPAIR MORTAR – IF REQUIRED

1. PLANITOP SMOOTH & REPAIR R4

Structural R4 class, rapid setting, shrinkage compensated, thixotropic, fiber reinforced, cementitious mortar, applied in a single layer from 3 to 40 mm thick.

- **APPLICATION:**

- ◇ Mix and apply the mortar in accordance with the respective TDS.
- ◇ Once repair work is complete and the material has hardened (approx. 25 minutes), keep the mortar damp for the first 24 hours using a water spray, especially in hot and windy environments.

1.5 BONDED ENGINEERED SCREED – IF REQUIRED

- **NOTE:** Prior to the application of the primer and junction detailing ensure the substrate has adequate falls in accordance with AS 4654.2. If not, install an engineered screed that incorporates falls.

I. *Bonded engineered screed to be chosen from the following options:*

1. TOPCEM PRONTO

Ready-to-use normal setting, controlled-shrinkage mortar for quick-drying screeds (4 days). Set for light foot traffic in 12 hours

2. MAPECEM PRONTO

Pre-blended, ready-to-use, quick-setting and drying (24 hours), controlled-shrinkage mortar for screeds. Set for light foot traffic in 2-3 hours.

- **APPLICATION:**

- ◇ Prior to the application of the screed, ensure a slurry coat of **PLANICRETE SP** mixed with either **MAPECEM** or **TOPCEM PRONTO SLURRY** has been applied depending on which product is chosen. Then apply the screed over the slurry coat whilst still fresh.
- ◇ Ensure a minimum thickness of 10 mm is applied.

1.6 JUNCTION DETAILING

- **WHERE TO USE:** Flexible sealant to be used at all junctions (wall-to-wall, wall-to-floor) and other locations that may be subjected to movement with a gap no larger than 10mm.

1. MAPEFLEX PU 45 FT

One component, rapid hardening, paintable, thixotropic polyurethane sealant, and adhesive with a high modulus of elasticity.

- **APPLICATION:**

- ◇ Open old joints and cracks with a grinder and remove loose and deteriorated parts.
- ◇ Seal joints (non-structural movement joints) and cracks.
- ◇ Seal structural movement joints prior to applying **MAPEBAND TPE** or
 - **MAPEBAND FLEX ROLL.**
- ◇ Detail wall/wall, wall/floor junctions and drainage outlets to avoid edges and angles which could damage the membrane.

1.7 PRIMERS

1. PRIMER SN + Quartz 0.5 – TIMBER, PLYWOOD, CEMENT BOARD, STRAND BOARD, COMPRESSED SHEET

Two-component epoxy pre-filled primer.

- **APPLICATION:**

- ◇ Mix part A thoroughly and then add the contents of part B and mix with a low- speed drill until the mix is completely blended, in accordance with the TDS.
- ◇ Apply one coat at 0.3-0.7 kg/m².
- ◇ Broadcast **Quartz 0.5** into the fresh coat of **PRIMER SN**. Once cured remove all loose sand and apply the waterproofing membrane within 12-24 hours after the application of the primer.

PRIMER EP RUSTSTOP – IRON, STEEL, STAINLESS STEEL GALVANISED STEEL, ALUMINIUM, ANODISED ALU, COPPER, LIGHT ALLOYS & ROOF FLASHINGS.

Two component epoxy primer for metallic surfaces, including *marine environments for anti – corrosion protection.*

- **APPLICATION:**

- ◇ Mix part A with part B with a low-speed electric mixer to thoroughly blend them together (at least 3-4 minutes). Pour the mix into a clean container and mix again briefly.
- ◇ Apply an even coat of PRIMER EP RUSTSTOP by brush, with a roller or a suitable airless spray unit.
- ◇ The Mix must be applied at a temperature of between +10 C and + 30 C.
- ◇ Apply one even coat @ 0.2KG / m²

MAPEDECK PRIMER 200 – GENERAL PURPOSE PRIMER FOR METALS – GRADE ST3

Two component polyurethane primer in water dispersion for promotion of adhesion to metals.

- ◇ Mix A and B with an electric mixer at low speed prevent air entrapment
- ◇ Apply the primer using a brush and or roller.
- ◇ Mixing ratio 10:1, Workable 2 hours @ +20 C
- ◇ Apply between +5 C & +35 C
- ◇ Hardening times @23 C and 50% RH – 1 Hour.

PRIMER BI – PRIMER FOR OLD BITUMEN

Synthetic resin-based primer in solvent to improve bond of PURTOP on bitumen

- ◇ Shake and mix prior to use.
- ◇ PRIMER BI may be applied by brush or roller or suitable airless spray unit
- ◇ Apply @0.20 kg/m² per coat. 2 coats may be required.
- ◇ Wait time before PURTOP 400 (2 – 4 hours)

1.8 WATERPROOFING MEMBRANE

- **A. PURTOP 400M**

Two-component, solvent-free, spray applied, hybrid polyurea membrane applied on site using a high-pressure, bi-mixer type pump to form waterproof coatings on roofs, podium decks, gutters & bridge, and carparks decks

APPLICATION:

- ◇ Ensure the bi-mixer pump temperature and pressure settings are set in accordance with the TDS.
- ◇ Mix part A until it has an even colour before use.
- ◇ Ensure the temperature of the substrate is at least 3°C above the dew point and the residual moisture is above 4%.
- ◇ Apply continuously at a consumption rate of approximately 2.2 kg/m² per 2 mm of thickness.
- ◇ If application is interrupted by more than 2 hours, apply a coat of **PRIMER PU 60** before recommencing spraying. An overlap of at least 300 mm must be achieved.

1.9 ALIPHATIC TOPCOAT

- 1. **Mapefloor Finish 451**

Two-component coloured aliphatic polyurethane topcoat for selected membranes from the Mapei coating range.

- **APPLICATION:**

- ◇ Blend part A and part B separately with an electric mixer at low speed then pour part B into the container of part A and mix until thoroughly blended.
- ◇ Apply a single coat within 24 hours of applying waterproofing membrane at a consumption rate 0.6 – 0.8 Kg/m². Ensure even rolling – cross roll to perform a uniform film.
- ◇ If required, .5 size aggregate can be added to the mix @ rate of 20% of mixed volume to assist with a non-slip surface, generally in defined localized areas only for maintenance traffic.

1. **Limited Warranty**

- a. MBP (NZ) LTD warrants that when MAPEI products are prepared, applied and installed in accordance with the products' Technical Data Sheet (TDS) plans, specifications, as well as with the relevant provisions of the New Zealand building code, the products will have the properties and characteristics set out in the TDS and will retain these properties and characteristics for the duration of the Warranty Period listed under the relevant MAPEI product warranty.
- b. MAPEI's warranties are limited to its products, and **do not** cover installation, workmanship or product mixing and preparation aspects. It is the sole responsibility of the applicator of the products to assess the substrate and the product/s' suitability for the intended application and final service provision of the product.
- c. A full list of all MAPEI product warranty terms and conditions is available upon request.

2. **No Responsibility**

- a. The applicator of a MAPEI product is not an agent or employee of MBP (NZ) LTD and therefore MBP (NZ) LTD takes no responsibility and assumes no liability for their workmanship or their use of the product in inappropriate circumstances or surfaces.
- b. Where expressly agreed with you in writing, MBP (NZ) LTD's representatives may supervise the preparation of MAPEI products to ensure that the preparation meets the products' specifications, on the basis that MBP (NZ) LTD does not take any responsibility for such supervision, as well as for,
 - a. any failure to apply the product in accordance with any relevant specifications, standards, regulation or similar; and the use of the product in inappropriate circumstances or on inappropriate (or inappropriately prepared) surfaces; and
 - b. the workmanship of the applicator of the product, even if our representatives are present at the time of application.

Any guidance MBP (NZ) LTD's representatives provide during their supervision will not modify any express manufacturers' warranty or product warranty relating to the relevant MAPEI products.

- c. MBP (NZ) LTD provides product information, including this specification, on a non-reliance basis. All information and proposals are given in response to the information provided to us. MBP (NZ) LTD is not liable for the assessment of whether the products and methodologies are suitable for your circumstances or whether they meet the requirements of the NZ Building Code or other regulatory requirements. This assessment and decision whether to use the products must be made by you

3. **Consumer Guarantees**

- a. Nothing in this Specification is intended to modify or negate a consumer's rights and remedies under the Consumer Guarantees Act 1993.
- b. In the event of inconsistency between the provisions of this Specification, our Terms of Trade and the relevant manufacturers or product warranty, the order of priority set out below will apply (with (a) having the highest priority):
 - a. MBP (NZ) LTD Terms of Trade.
 - b. Manufacturers or product warranty.
 - c. This Specification.

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