

ResinTech® PPM — Protective Polymer Membrane

Single-Component, Moisture-Cured Elastomeric Waterproofing & Protective Coating

1. Product Description

ResinTech® PPM is a single-component, moisture-cured elastomeric coating designed to form a continuous, seamless waterproofing membrane. Curing proceeds through reaction with ambient moisture, forming a crosslinked elastomeric film.

PPM is applied using conventional tools such as brush, roller or trowel, allowing formation of a dense, pinhole-free membrane on horizontal, vertical and inclined surfaces when applied at the recommended thickness.

2. Performance Characteristics

- Ready-to-use, single-component formulation — no on-site proportioning or mixing
- Seamless, joint-free waterproofing membrane
- Elastomeric behaviour with high elongation capacity (648% tested) to accommodate substrate movement
- Good retention of mechanical properties following thermal ageing
- Resistance to intermittent exposure to dilute acidic and alkaline solutions
- Low VOC content (19.2 g/L tested)
- Tested bond strength of 1.06 MPa on concrete, exceeding the ≥ 1.0 MPa requirement
- Suitable for exterior exposure; weather resistance dependent on system build and exposure conditions

3. Typical Applications

- Parkades, ramps and mechanical rooms
- Balconies, patios, podium slabs and sun decks
- Basements, foundations and retaining walls
- Swimming pool decks, tanks and containment areas
- Planters, roofs and waterproofing details
- Infrastructure and dam-proofing waterproofing applications
- Intermediate waterproofing layer within ResinTech coating systems

Standalone System Use — Roofing Applications

PPM may be used as a standalone liquid-applied waterproofing membrane in roofing applications where mechanical traffic or wear layers are not required.

For roofing over occupied or living spaces, enhanced waterproofing redundancy is recommended. In these conditions, PPM is typically installed as a multi-layer membrane system, consisting of three successive coating stages, each applied at approximately 20–25 mils wet film thickness, for a minimum total membrane thickness of approximately 60 mils. This multi-stage application improves waterproofing reliability, crack-bridging performance and long-term moisture protection over sensitive areas.

For non-occupied roof areas or roofing not located over living space, PPM is typically applied as a single-stage or multi-coat membrane at a total thickness of approximately 20–25 mils, subject to substrate condition, detailing complexity and environmental exposure.

Final membrane thickness, number of coats and detailing requirements shall be confirmed based on project conditions and design requirements.

4. Substrates & Surface Preparation

All substrates must be structurally sound, clean, dry and free of contaminants that may impair adhesion.

- **Concrete:** minimum 28-day cure; mechanically profiled (CSP 3)
- **Metal:** abrasive blast cleaning to near-white metal
- **Cracks and joints:** reinforcing fabric recommended where movement is anticipated
- **Priming:** ResinTech® CBE or TUE primer may be employed for enhanced adhesion

5. Application & Curing Guidelines

Application methods: brush, roller or trowel; spray / airless spray application.

- Apply directly from container; no proportioning required
- Recommended thickness (waterproofing): 1.2–1.5 mm
- Approximate consumption: 1.5–1.8 kg/m² at full recommended thickness
- Avoid excessively thick single coats to reduce blistering risk
- Coverage: 80–100 sq.ft per US gallon **per coat** (depending on application method and film thickness)
- Clean tools with solvent before curing

Curing Characteristics (typical, ~20 °C)

- Drying time: approximately 9 hours
- Recoat window: 16–24 hours
- Full cure: 24–48 hours

Curing rate and final film properties are influenced by temperature, humidity, airflow and applied film thickness.

6. Typical Physical Properties

Mechanical Properties

Property	Result
Tensile Strength	2.45 MPa
Elongation at Break	648%
Tear Strength	19 N/mm
Bond Strength (Concrete)	1.06 MPa

Durability & Environmental Resistance

Property	Result
Low-Temperature Flexibility	–35 °C, no cracking
Heat Ageing (80 °C, 168 h) — Tensile Retention	95%
Heat Ageing (80 °C, 168 h) — Elongation	566%
Alkali Immersion (168 h) — Tensile Retention	93%
Alkali Immersion (168 h) — Elongation	564%
Acid Immersion (168 h) — Tensile Retention	94%
Acid Immersion (168 h) — Elongation	559%

Physical & Application-Related Properties

Property	Result
Water Impermeability	0.3 MPa × 120 min, impermeable
Solid Content	88.5%
Absorption Rate	2.8%
VOC Content	19.2 g/L
Drying Time	9 h
Working / Action Time	21 h

7. Packaging, Storage & Shelf Life

Packaging	10 L pails
Storage	Cool, dry conditions; 5–30 °C
Shelf life	12 months (unopened)

Protect from direct sunlight, moisture ingress and freezing.

8. Limitations

- Do not exceed the recommended thickness in a single application; excessive thickness may cause blistering
- Reinforcement fabric is recommended at cracks and expansion joints
- PPM is not intended to function as a vapour barrier or for negative-side hydrostatic pressure without additional design measures

9. Health & Safety

Use adequate ventilation during application. Avoid contact with skin and eyes. Wear appropriate personal protective equipment consistent with industrial coatings practice. Refer to the ResinTech® PPM Safety Data Sheet (SDS) for complete health and safety information.

10. Disclaimer

The information contained herein is based on reported laboratory data and typical application experience. Actual performance may vary depending on substrate condition, environmental exposure and installation practices. ResinTech's responsibility is limited to replacement of material proven to be defective.

Document: TDS-PPM v1.1 **Supersedes:** v1.0 **Revision notes:** bond-strength characteristic aligned to tested value; coverage clarified per coat; packaging confirmed.