

ResinTech® FPU — Flexible Polyurethane Base Membrane

Single-component elastomeric waterproofing and crack-bridging base layer for protected traffic, balcony, podium and deck systems — the flexible foundation of the ResinTech line

PRODUCT SNAPSHOT

Product class	Single-component, high-solids elastomeric polyurethane waterproofing membrane	Best identity	ResinTech's flexible movement layer under approved coating, traffic or protection systems
Mixing	Ready to use; stir until uniform. No A + B mixing required.	Primary use	Flexible crack-bridging base membrane, waterproofing layer and detail membrane
Use environment	Protected interior / exterior assemblies; topcoat or wearing course required for UV and traffic exposure	Finish	Normally covered by HPP, CRU, broadcast coat, tile, screed, protection board or wearing course
Traffic build range	20–25 mils standard crack-bridge layer; 40–50 mils enhanced movement layer	Waterproofing build	Typically 1.0–1.5 mm (≈40–60 mils) finished membrane in 2–3 coats where specified

WHAT FPU IS

ResinTech® FPU is a single-component polyurethane membrane used where the coating system needs flexibility, waterproofing and crack-bridging below the exposed wear surface. It is the movement-control layer of the ResinTech line: it helps protect prepared substrates from normal cracking and water intrusion, but it is not the final wear coat. In traffic coating work, FPU belongs under the surface system, where it can be protected by HPP, CRU, epoxy broadcast layers, tile, screed, protection board or another approved wearing course.

Where FPU sits: FPU is the flexible base / movement layer — **not the wear surface**. Always protect the cured membrane with an approved ResinTech wearing course (HPP, CRU, epoxy broadcast, tile, screed or protection board) before service. Never leave it exposed to UV, traffic or chemicals.

SIMPLE USE GUIDE

USE MODE	PLAIN-ENGLISH PURPOSE	TYPICAL BUILD	BEST PRACTICE
Standard crack-bridging base	Adds flexible movement tolerance below pedestrian or traffic coatings.	20–25 mils	Use where added substrate-risk protection is specified without high movement demand.
Enhanced membrane base	Higher film build for balconies, podiums, rooftops and occupied-space risk.	40–50 mils	Use where crack movement, details or waterproofing consequence is higher.
Protected waterproofing membrane	Liquid-applied waterproofing under tile, screed, protection board or wearing course.	1.0–1.5 mm	Apply in 2–3 coats; do not exceed 0.7 mm wet film per coat.
Detail reinforcement	Strengthens corners, drains, transitions, penetrations and static cracks.	Extra coat / fabric	Embed compatible reinforcement fabric where details are movement-prone or high risk.
Traffic coating base layer	Flexible membrane below HPP, CRU and reinforced traffic assemblies.	Per system design	Do not leave exposed to UV, tires, abrasion or standing service without approved protection.

RECOMMENDED USES

- Balcony, podium, plaza and rooftop deck waterproofing under approved protection systems
- Crack-bridging base membrane below ResinTech traffic coatings where movement accommodation is required
- Parking deck waterproofing below approved aggregate, reinforced or traffic-bearing wearing courses
- Wet-area waterproofing under compatible tile, screed or protection layers
- Detail membrane around drains, corners, wall / floor transitions, pipe penetrations and static cracks
- Strata, parkade, balcony and podium restoration where water control and movement risk matter
- Protected below-grade, foundation, retaining wall and masonry waterproofing after proper preparation
- Substrate-risk protection where standard rigid coatings alone are not enough

KEY ADVANTAGES

- **Flexible protection:** high-elongation membrane helps bridge normal substrate cracking and movement below the wear surface.
- **Waterproofing support:** seamless liquid-applied layer for balconies, podiums, decks, wet areas and protected assemblies.
- **Installer-friendly:** single-component material applied by roller, brush, squeegee / scraper or approved spray equipment.

PRODUCT DATA

PROPERTY	TYPICAL VALUE	METHOD / NOTE
Components	Single component	Moisture-curing polyurethane; stir before use
Chemistry	Polyurethane waterproofing membrane	Isocyanate / polyether-polyol based technology
Solids content	98% by weight	ASTM D1353 / high-solids, solvent-free grade
Appearance	Liquid-applied coating	Colour subject to production availability
VOC	Low – solvent-free grade	Confirm current SDS for regulatory g/L reporting
Application methods	Roller, brush, scraper / squeegee or approved airless spray	Use a wet-film gauge during application
Packaging	20 kg pail (kit volume to be confirmed)	Other sizes subject to availability
Shelf life	12 months	Unopened, stored properly at 5–35 °C

PERFORMANCE PROPERTIES

PROPERTY	TYPICAL VALUE	TEST METHOD / NOTE
Bond strength to concrete	150 psi	ASTM D4541; surface prep and primer control final adhesion
Tensile strength	300 psi	ASTM D412 reporting class
Elongation	800%	ASTM D412; flexible membrane function
Tear strength	≈ 86 lbf/in	ASTM D624 reporting class (15 N/mm)
Shore hardness	65 A	ASTM D2240; elastomeric, not a Shore D hardcoat
Tack-free time	8 hours	ASTM D1640 typical
Drying time	20 hours at 15 mils	ASTM D1640, 24 °C / 50% RH
Watertightness	≈ 44 psi for 120 min, watertight	EN 1928 reporting class (0.3 MPa)
Low-temperature flexibility	–35 °C, no cracking	ASTM D522 reporting class
UV stability	Limited	Requires an approved UV-stable topcoat or protection if exposed

Chemical resistance	Limited	Use a protected system design for chemical or abrasive service
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COVERAGE AND FILM BUILD

APPLICATION	FILM BUILD	≈ COVERAGE / 20 KG KIT	PRACTICAL NOTE
Traffic crack-bridge base	20–25 mils	≈300–240 ft ²	Used below compatible coating assemblies when a flexible base is specified
Enhanced movement base	40–50 mils	≈150–120 ft ²	Typical for balconies, podiums, rooftop decks and over-occupied spaces
Protected waterproofing membrane	1.0–1.5 mm (≈40–60 mils)	≈155–105 ft ²	Apply in 2–3 coats; consumption varies with substrate profile and details
Theoretical consumption	≈1.3–1.5 kg/m ² per 1 mm DFT	≈165–145 ft ² at 1 mm	Smooth substrate only; verify by mock-up or site trial
Maximum coat thickness	0.7 mm (≈28 mils) wet per coat	—	Thicker coats increase bubbling, skinning or slow-cure risk

Coverage per 20 kg kit is approximate (based on ≈1.3–1.5 kg/m² per mm DFT on a smooth substrate, implying ≈1.4 g/mL density). The kit volume is still to be confirmed — verify actual yield by mock-up.

APPLICATION CONDITIONS

CONDITION	REQUIREMENT
Substrate temperature	5–35 °C during application and cure
Ambient condition	Dry, stable conditions; protect from rain, condensation and water exposure before cure
Dew point	Substrate must remain at least 3 °C above dew point
Substrate condition	Structurally sound, stable, clean, smooth and dry
Concrete strength	3,600 psi compressive and 220 psi tensile pull-off recommended for coating systems
Recoat interval	Typically 8–12 hours between coats, depending on film build, temperature, humidity and ventilation
Subsequent protection	Allow membrane to dry before applying topcoat, broadcast, tile, screed or protection layer

SURFACE PREPARATION

- Substrate must be sound, stable, clean, smooth and dry before application.
- Remove dust, laitance, grease, oils, curing compounds, loose coatings, standing water and bond breakers.
- Grind high spots and repair holes, honeycombs, cracks, sharp transitions and surface defects before coating.
- Prime porous, marginal, moisture-risk or project-specified substrates with a ResinTech-approved primer.
- Existing coatings require compatibility and adhesion testing before overcoating.
- Do not apply over damp, frozen, contaminated, incompatible or unprepared substrates.

APPLICATION METHOD

STEP	REQUIREMENT
Mixing	Stir thoroughly with a low-speed mixer until uniform. Avoid entraining air. Do not thin unless approved in writing.
Detail work	Pre-treat corners, drains, wall / floor junctions, penetrations, static cracks and transitions with an extra coat or reinforcement fabric.
Field coat	Apply evenly by roller, brush, rubber scraper / squeegee or approved spray in 2–3 coats.

Coat direction	Apply each coat perpendicular to the previous coat where practical to reduce pinholes and improve coverage.
Inspection	Check wet film thickness, pinholes, voids, thin spots, damage and contamination before the next coat or protection layer.
Bonding to tile / screed	Broadcast clean dry fine sand into the final uncured coat where subsequent tile, plaster, mortar or screed bonding is required.

TRAFFIC COATING POSITION

- FPU is the flexible base membrane. It should be covered by a ResinTech-approved traffic or protection system before service.
- Use **HPP** for fast, UV-stable exposed traffic-surface performance.
- Use **CRU** where the final surface needs premium abrasion, chemical and UV protection.
- Use **CBE** or **TUE** as epoxy primers, binders or reinforced build layers where specified by the system design.
- Do not use FPU as the exposed tire-traffic, abrasion or chemical wear surface.
- Movement joints must remain functional and receive a project-specific joint detail.

LIMITATIONS

- Not intended as a final exposed wear surface by itself.
- UV-exposed applications require an approved UV-stable topcoat or protection system.
- Pedestrian or vehicular traffic requires an approved wearing course, aggregate system or protection layer.
- Do not bridge expansion joints or active movement joints with field membrane alone.
- Do not exceed 0.7 mm (≈28 mils) wet film per coat unless approved by ResinTech.
- Do not use for potable water, tank, pool, submerged or aggressive chemical service unless the full system is specifically approved.

STORAGE, SAFETY AND MAINTENANCE

ITEM	REQUIREMENT
Storage	Store sealed in original containers in a cool, dry, ventilated area at 5–35 °C
Protection	Protect from direct sunlight, heat, moisture, rain and freezing
Shelf life	12 months from date of manufacture when stored properly unopened
Safety	Isocyanate-based uncured material: read the SDS; use gloves, eye protection, protective clothing and ventilation
In service	Membrane must be protected from traffic, abrasion, UV, backfill, sharp damage and contamination by approved system layers

SPECIFIER SHORT FORM

Provide ResinTech® FPU Flexible Polyurethane Base Membrane, a single-component high-solids elastomeric polyurethane membrane used as a waterproofing and crack-bridging base layer below compatible ResinTech coating, traffic or protection systems. Apply to clean, sound, dry and properly prepared substrates at the thickness required by the project design. Protect the cured membrane with the specified topcoat, aggregate / wearing course, tile, screed, protection board or other approved system layer before service exposure.

DISCLAIMER

The information in this Technical Data Sheet represents typical values and practical guidance based on ResinTech product information, internal product data and common industry practice for liquid-applied polyurethane waterproofing membranes. It is not a guarantee of performance. Actual results depend on substrate condition, preparation, moisture, temperature, humidity, ventilation, film thickness, detailing, drainage, protection, traffic, maintenance and project design. Users, installers and specifiers are responsible for confirming suitability for the intended use and following the current SDS and project requirements.

The flexible foundation of the ResinTech system: waterproof and crack-bridge with **FPU**, then build and protect on top — **CBE** / **TUE** epoxy layers, **HPP** fast-cure UV-stable finish or **CRU** armor topcoat. FPU must always be covered by an approved wearing course before service.