FORSPEC PROTECTIVE COATINGS

PROBOND 1100.



Technical Data Sheet | **High-Strength Two-Component Structural Epoxy Paste Adhesive** | **Issue date: 12 November 2026**

Description

PROBOND 1100 is a high-strength, low-modulus two-component structural epoxy paste engineered for crack and structural repair, for bonding freshly mixed concrete to hardened concrete on vertical and horizontal surfaces, and for anchoring and void filling across concrete, masonry, metal, brick, timber, stone and block. Its non-sag paste consistency holds position on overhead and vertical work without slump, and it cures to a thin, impermeable layer that seals the repair against moisture ingress while developing bond strength to hardened concrete beyond 20 MPa.

Within FORSPEC systems PROBOND 1100 is the specified epoxy adhesive for FORSPEC EXPANDOFLEX JOINT TAPE installation and for selected FORSPEC sheet-applied membrane terminations. In general construction it serves as an injection adhesive, as the binder for epoxy mortar, as an anchoring adhesive for bolts and dowels, as the capping and port-setting paste in crack injection procedures, and as the binder for high friction surface treatments on concrete and asphalt. Supplied in 600 mL dual cartridges and in 10 kg and 20 kg kits at 1:1 by volume.

Advantages

- High-strength, low-modulus structural adhesive — robust bonding with the flexibility to accommodate differential movement.
- Non-sag paste consistency for vertical and overhead application without slump.
- Cures to a thin, impermeable layer that seals the repair against moisture ingress.
- Bond strength to hardened concrete of 20.1 MPa at 14 days.
- Rapid curing formula — minimum cure achieved in 6 hours at 24°C.
- Very low shrinkage on cure at 0.2%.
- The specified adhesive for FORSPEC EXPANDOFLEX JOINT TAPE installation.
- Supplied in 600 mL dual cartridges for detail work and in 10 kg and 20 kg kits for volume application.

Uses

- Structural crack repair and void filling in concrete, masonry and other substrates, 3 mm to 20 mm in width.
- Bonding freshly mixed concrete to hardened concrete on vertical and horizontal surfaces.
- Bedding and capping adhesive for FORSPEC EXPANDOFLEX JOINT TAPE, including recessed saw-cut installation.
- Port setting and crack capping in the FORSPEC epoxy injection procedure.
- Anchoring adhesive for bolts and dowels.
- Binder for epoxy mortar and for spall patch repair with kiln-dried aggregate.
- Selected FORSPEC sheet-applied waterproofing membrane terminations.
- Binder for high friction surface treatments on concrete and asphalt.
- Patching holes and crevices in concrete, and repair adhesive for metal, brick, timber, stone and block.

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Compliance Status

All values for PROBOND 1100 are typical FORSPEC R&D values, stated against their test method.

STANDARD / TEST	STATUS	REFERENCE
ASTM D638-14 — tensile properties	Manufacturer data	Forspec R&D *
ASTM D695-15 — compressive properties	Manufacturer data	Forspec R&D *
ASTM D790-17 — flexural properties	Manufacturer data	Forspec R&D *

Technical Data

Certified values are stated against their governing report. All other values are typical R&D characteristic values and are asterisked.

PROPERTY	VALUE	BASIS
Product type	Two-component, solvent-free structural epoxy paste adhesive	—
Mixing ratio	1:1, Part A to Part B	—
Colour — Part A	Clear to light amber	—
Colour — Part B	Amber	—
Colour — mixed	Grey	—
Packaging	600 mL dual cartridge; 10 kg and 20 kg kits	—
Viscosity	2,210 cps at 25°C	FORSPEC R&D to ASTM D2196 *
Tensile strength	29.02 MPa	ASTM D638-14 *
Compressive strength	55.2 MPa	ASTM D695-15 *
Flexural strength	35.37 MPa	ASTM D790-17 *
Bond strength to hardened concrete	15.6 MPa at 2 days; 20.1 MPa at 14 days	FORSPEC R&D to ASTM C882 *
Shrinkage on cure	0.2%	FORSPEC R&D to ASTM D2566 *
Heat deflection temperature	49°C	FORSPEC R&D to ASTM D648 *
Gel time (60 g mass)	25 minutes	FORSPEC R&D to ASTM C881 *
Tack-free time (at 23°C)	3–5 hours	FORSPEC R&D to ASTM D1640 *
Working time (at 25°C, 50% RH)	Approx. 40–45 minutes ‡	FORSPEC R&D to ASTM C881 *
Crack width range	3–20 mm	—
Application temperature	+5°C to +35°C	—
Service temperature after curing	−7°C to +50°C	—
Shelf life	24 months, unopened, stored at 5–35°C *	*

‡ Working time at 25°C is derived from the temperature-dependence data below (45 minutes at 24°C).

* Typical R&D characteristic values, not for engineering design without written FORSPEC confirmation.

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Temperature Dependence

Working time and cure are strongly temperature dependent. Plan batch sizes and placement rates against the actual site temperature, not the nominal reference condition.

TEMPERATURE	WORKING TIME	MINIMUM CURE TIME
4°C	90 minutes	—
10°C	—	10 hours
24°C	45 minutes	6 hours
30°C	—	2 hours
40°C	20 minutes	—

Values as recorded in the source data. * Typical R&D characteristic values, not for engineering design without written FORSPEC confirmation.

Coverage and Yield

Demand is a direct function of the void or crack cross-section and the bonding area. Volume required = cross-sectional area (mm^2) × length (m) ÷ 1000 mL per litre.

APPLICATION	DEMAND	BASIS
Crack filling — 5 × 12 mm	60 mL per linear metre *	Cross-section × length
Crack filling — 10 × 15 mm	150 mL per linear metre *	Cross-section × length
Crack filling — 20 × 20 mm	400 mL per linear metre *	Cross-section × length
EXPANDOFLEX bedding — 200 mm tape	40 mm bonding width per side at 1.0–1.5 mm, plus capping *	Refer to the EXPANDOFLEX TDS
Spall patch	13–16 mm depth over the prepared area *	Grind depth per the spall procedure
600 mL cartridge	Approx. 10 m at 5 × 12 mm; approx. 4 m at 10 × 15 mm *	Direct volume calculation

Allow for nozzle purge, static mixer waste and overfill. Minimum adhesive depth in gravity-feed crack repair is 12 mm. * Typical R&D characteristic values, not for engineering design without written FORSPEC confirmation.

Limitations

- Not for use in contact with potable (drinking) water.
- Not a waterproofing membrane — PROBOND 1100 seals and bonds within a system; it does not waterproof an area.
- Not for application to damp, wet or frosted substrates, or where moisture is present in the crack or void.
- Not for cracks narrower than 3 mm — specify CRACKLOCK E400L for 0.05–3 mm, or CRACK PRO 1200PS for fine to medium cracks.
- Not for new concrete less than 28 days old.
- Do not apply below 5°C or above 35°C substrate and ambient temperature.
- Do not dilute, extend, re-temper or add solvent under any circumstances.
- Do not leave the full mixed kit standing confined in the mixing container — the reaction is exothermic.
- Do not apply to the central flexible zone of FORSPEC EXPANDOFLEX JOINT TAPE.
- Not designed for structural load transfer across a movement joint.
- Where the mixed material has begun to gel, discard it — gelled material cannot be reworked.

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Surface Preparation

- New concrete must be a minimum of 28 days old before repair.
- Regardless of age, concrete surfaces must be clean, sound, completely dry and profiled or textured — moisture in the substrate will prevent bond development.
- Remove all dirt, dust, laitance, curing compounds, oils, grease, wax, surface sealers, coatings and any other bond-inhibiting contaminant by mechanical means, then vacuum thoroughly.
- Establish a roughened profile by rough-grinding, scarifying, bush hammering or equivalent mechanical preparation — a roughened profile is critical to adhesion.
- Mechanically roughen smooth surfaces with a wire brush or abrasive paper before application.
- Where the product is used as a bonding adhesive between two surfaces, confirm both surfaces are sound and free of dust, dirt, grease, wax, oil and all other contaminants.
- Confirm the substrate is dry and that no moisture is present in the crack or void before application.

Mixing — Kit Use

- Pre-condition both components to 21–24°C before mixing to achieve the correct viscosity balance.
- Pour equal parts of Part A and Part B into a clean pail.
- Mix with a slow-speed mechanical mixer at 300–400 rpm using a helical or paddle blade.
- Mix continuously for 2–3 minutes, scraping the sides and base, until a uniform grey colour is achieved with no streaks.
- Apply immediately after mixing. Do not leave mixed material standing in the container.
- Mix only the quantity that can be placed within the working time for the prevailing site temperature.

Cartridge Set-Up

- Keep the cartridge upright throughout preparation to prevent material leakage.
- Shake the cartridge for one minute, then stand it upright for a further minute to allow entrained bubbles to rise.
- Remove the plastic cap and plug by unscrewing both components.
- Insert the cartridge into the FORSPEC Heavy Duty Dual Cartridge Gun, seating it securely.
- Dispense material into a disposable container until both resin and hardener flow evenly and the mixed colour is uniform — do not begin work on an unverified flow.
- Attach the flow control port and static mixing nozzle firmly, then dispense slowly through the nozzle.
- Aim to consume an entire cartridge without interruption to maintain consistent flow. Remove the mixing nozzle after use and store the cartridge correctly.

Application — Crack Filling and Void Repair

- Clean the crack and surrounding area thoroughly by grinding, wire brushing and vacuum, removing all dust, dirt, loose material and contaminants.
- Confirm the substrate is dry, sound and free from oils, grease and curing compounds.
- Once mixed — from the dual cartridge or the manually mixed kit — apply immediately while the material remains workable.
- Inject or gravity-feed PROBOND 1100 directly into cracks and voids from 3 mm to 20 mm in width, ensuring the adhesive fully penetrates the void to achieve a complete bond.
- Maintain a minimum adhesive depth of 12 mm in gravity-feed repairs.
- For larger voids, fill in successive layers to avoid air entrapment and achieve uniform adhesion.
- Where adhesive loss is a risk in wide cracks, insert backer rod or sand to control it.
- Keep the adhesive flowing through the nozzle to prevent hardening in the static mixer.
- Allow the adhesive to penetrate and top off as required.

Application — Concrete Patching and Spall Repair

- Cut around the spall into sound concrete with a grinder or circular saw using a diamond or concrete abrasive blade — never feather the edge.
- Grind the damaged area to a consistent depth of at least 13 mm and no greater than 16 mm.
- Clear all loose concrete from within the spall and complete surface preparation.
- Press the mixed material firmly into the spalled or damaged area with a trowel or spatula, working it into the substrate to exclude air.

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Application — Concrete Patching and Spall Repair (continued)

- Overfill slightly, then trowel smooth and flush with the surrounding concrete.
- Allow to cure fully before grinding or coating.

Application — Anchoring and Fixing

- Drill and clean the anchor hole, removing all dust by compressed air and brush.
- Fill the hole partially with the mixed adhesive — sufficient that insertion of the anchor displaces adhesive to the collar.
- Insert the bolt or dowel with a slow twisting motion to achieve full encapsulation and expel entrapped air.
- Remove excess material from around the hole before it cures.
- Do not disturb or load the anchor until the adhesive has fully cured — typically 24–48 hours depending on temperature.

Drying, Curing and Testing Times

All times below are stated at 25°C and 50% RH except where a source reference condition is noted. Refer to the Temperature Dependence table for cure at other temperatures.

STAGE (AT 25°C, 50% RH)	TIME
Gel time (60 g mass)	25 minutes *
Working time	Approx. 40–45 minutes ‡
Tack-free	3–5 hours at 23°C †
Minimum cure	6 hours at 24°C †
Grinding, coating and finishing	After full cure *
Anchor loading	24–48 hours, temperature dependent
Return to service	After full cure and inspection *

† Stated at the reference temperature shown. ‡ Derived from the temperature-dependence data. * Typical R&D characteristic values, not for engineering design without written FORSPEC confirmation.

Clean Up

Clean tools and equipment promptly with FORSPEC EPOXY CLEANER while the material remains uncured, where both component Safety Data Sheets permit the solvent in question. Never allow the epoxy to cure on tools, nozzles or equipment — cured material can only be removed by mechanical means. Do not flush epoxy into drains or sewers.

Container and Waste Disposal

Combine and allow residues to fully cure and harden before disposal, then dispose in accordance with State and local requirements. Route unused, uncured components to an authorised waste collection point per Section 13 of the Safety Data Sheet of each component. Spent cartridges and static mixers are disposed of as cured epoxy waste. Do not reuse contaminated packaging and do not discharge uncured product to drains, soil or waterways.

Quality Records

Record the batch numbers of Part A and Part B for every cartridge and kit used, substrate preparation method and profile achieved, crack and void dimensions, adhesive depth achieved in gravity-feed repairs, mixing method and mix times, ambient and substrate temperature at placement, working time observed, cure periods before grinding, coating or loading, and final inspection results, as part of the project quality assurance records.

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Storage

Store in original, unopened containers in a dry, ventilated area between 5°C and 35°C, protected from direct sunlight, frost and moisture, with the two components stored so that cross-contamination cannot occur. Shelf life: 24 months from the date of manufacture when stored as specified.*

Safety Precautions and First Aid

Refer to the current Safety Data Sheets before use — both Part A and Part B are separately classified. Uncured epoxy resins cause serious eye damage and skin irritation, and hardener components may cause skin sensitisation and respiratory sensitisation in susceptible persons. Wear impermeable nitrile gloves, eye and face protection and long-sleeved protective clothing, and use respiratory protection where ventilation is inadequate or where the SDS and workplace risk assessment require it. Ensure good airflow in enclosed and confined areas. Avoid all skin contact with uncured material. The reaction is exothermic — never leave a full mixed kit standing confined in the mixing container. Do not eat, drink or smoke when handling; wash hands before breaks and after work; contaminated work clothing must not leave the workplace.

First aid — Eyes: hold eyelids apart and flush continuously with running water for at least 15 minutes and transport to hospital or a doctor without delay. Skin: remove contaminated clothing and footwear and wash the affected area thoroughly with soap and water; seek medical advice if irritation, rash or sensitisation occurs. Inhaled: remove to fresh air and keep comfortable for breathing; seek medical attention if respiratory symptoms occur. Swallowed: do NOT induce vomiting; rinse mouth and seek immediate medical attention. POISONS INFORMATION CENTRE: 13 11 26 (Australia-wide, 24 hours). In an emergency, dial 000. KEEP OUT OF REACH OF CHILDREN. Read the Safety Data Sheet (SDS) before use — available at www.forspec.com.au.

Warranty

Standard Product and Performance Warranty: Forspec Protective Coatings Pty Ltd as Trustee for Forspec Protective Coatings (ABN 11 204 033 631) warrants that PROBOND 1100 will be free from manufacturing defects and will not fail under normal usage for a period of ten (10) years from the date of purchase, when installed and used strictly in accordance with this Technical Data Sheet and Forspec's written instructions. This warranty covers the supply of the product only; it does not cover installation, application or workmanship. Remedies are limited, at Forspec's discretion, to replacement of the defective product (or defective portion) or a refund of the purchase price. The full terms, conditions and exclusions are set out in the Forspec Standard Product and Performance Warranty, available at www.forspec.com.au — key conditions include application by a suitably qualified and, where required by law, licensed applicator; use within shelf life; and installation as part of a Forspec approved system without non-approved third-party products.

Project and system warranties: extended project-specific warranties are available at the request of the applicator and must be applied for using the Forspec Warranty Request Form prior to commencement of works. Issue is subject to Forspec approval and is conditional on the use of the complete specified FORSPEC system, application in strict accordance with the current TDS by suitably qualified applicators, and completion of the project quality records described above. The warranty period and terms are as stated in the issued warranty certificate.

Claims: notify Forspec in writing within thirty (30) days of discovery of the alleged defect and within the warranty period, by post to 22/872 Canterbury Road, Roselands NSW 2196 or by email to info@forspec.com.au, including proof of purchase, installation details (date, location, installer), a description of the defect with supporting evidence, and your contact details. Forspec may inspect the site, perform testing and collect samples before determining a claim.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Data Sheet Currency

This Technical Data Sheet (TDS) and the corresponding Safety Data Sheet (SDS) are subject to revision as necessary to ensure compliance with relevant Australian Standards and to incorporate technological advancement. Read the most current versions before use, as application and performance data may be updated. For the latest technical information, contact Forspec Protective Coatings on (02) 8021 3517 or info@forspec.com.au. The information provided is representative and does not serve as a comprehensive specification. For specific projects, consult directly with Forspec Protective Coatings for tailored specifications. This data sheet was issued on 12/11/2026 and is valid for three years from the date of issue unless superseded by a later revision — always confirm the current version at www.forspec.com.au before use.

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