FORSPEC PROTECTIVE COATINGS

PROBOND 1100PS

Technical Data Sheet High Strength Epoxy Paste 22/01/2025

PROBOND 1100PS is a high-performance, two-component epoxy adhesive engineered for a range of advanced applications. It is specifically formulated for crack and structural repairs, creating durable, long-lasting bonds between freshly mixed concrete and hardened concrete on both vertical and horizontal surfaces. Additionally, **PROBOND 1100PS** excels in filling voids and cracks in concrete, masonry, and various other substrates. It serves as an effective injection adhesive, binder for epoxy mortar, and anchoring adhesive, while also being suitable as a binder for high friction surface treatments (HFST) on concrete, asphalt, or other surfaces, ensuring optimal adhesion and structural integrity in demanding environments.

Product Specifications

Product Name: PROBOND 1100PS
Product Code: [Insert Product Code]
Size: 600mL
Ratio: 1:1 (Part A to Part B)
Color:

- Part A: Clear to Light Amber
- Part B: Amber
- Mixed: Amber

- A structural adhesive with high strength and low modulus
- Forms a thin, impermeable layer post-curing
- Rapid curing formula
- Non-toxic and safe for contact with drinking water after curing
- Compliant with AS/NZS4020 standards for Potable Drinking Water

PROBOND 1100PS Applications:

- Restoring cracks in concrete, masonry, and diverse substrates
- Establishing secure connections between newly poured and cured concrete
- Efficiently filling voids and fissures
- Conducting injection-based structural enhancements
- Acting as a binding agent in epoxy mortar formulations
- Providing anchorage strength for diverse applications
- Serving as a binding element in High Friction Surface Treatments (HFST) for concrete, asphalt, and alternative substrates.
- Furthermore, its utility extends to multiple uses, encompassing selected FORSPEC Sheet Applied Waterproofing Membrane terminations, patching holes and crevices in concrete, affixing anchor bolts, or functioning as a repair adhesive for a broad spectrum of materials, including metal, concrete, brick, wood, stone, block, and beyond.

PROBOND 1100PS Properties

Viscosity	2,210 Cps @ 25°C	**Service Temperature (After Curing)**	-7°C up to 50°C
Colour	Grey	**Working Time**	90mins @ 4°C
Gel Time (60G)	25 Min		45mins @ 24°C
Tack Free Time (23°C)	3-5 Hours		20mins @ 40°C
Tensile Strength (ASTM D638-14)	29.02 MPa	**Minimum Curing Time (Hr)**	10hr @ 10°C
Compressive Strength (ASTM D695-15)	55.2 MPa		6hr @ 24°C
Flexural Strength (ASTM D790-17)	35.37 MPa		2hr @ 30°C
Shrinkage On Cure	0.2%	**Bond Strength Hardened To**	15.6 MPa @ 2 days
Heat Deflection Temperature	49°C (120°F)	**Hardened Concrete**	20.1 MPa @ 14 days

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Preparation

- Utilize mechanical methods and vacuum cleaning as necessary to eliminate all traces of dirt, dust, curing compounds, oils, grease, surface sealers, and any other contaminants.
- New concrete surfaces should have a minimum curing period of 28 days. Regardless of age, concrete surfaces must be clean, profiled, or textured.
- Prepare the surface by employing techniques such as rough-grinding, scarifying, bush hammering, or other equipment that facilitates the creation of a roughened profile.
- Achieving a roughened surface is critical for ensuring optimal adhesion.
- When utilizing **PROBOND 1100PS** as a bonding adhesive between two surfaces, it is imperative to ensure that both surfaces are sound and free from any dust, dirt, grease, wax, oil, or other contaminants.
- Smooth surfaces should be mechanically roughened using a wire brush or sandpaper prior to application to enhance adhesion.

Cartridge Set Up

- Remove the plastic cap and plug by unscrewing both components.
- Insert the cartridge into the FORSPEC Heavy Duty Dual-Cartridge gun (600ML), ensuring it is seated securely.
- Ensure both materials flow uniformly by dispensing a small amount of product into a disposable container, checking the consistency of both components.
- Attach the mixing nozzle firmly onto the cartridge, ensuring a secure fit.
- Dispense a small quantity of material to ensure a uniform mixture before full application, confirming both components have properly blended.
- Check the flow to ensure the cartridge is dispensing evenly before beginning the application process.
- Remove the mixing nozzle after use and store the cartridge properly for future use.

Crack Injection Repair

Surface Preparation:

1. Thoroughly clean the crack and surrounding area, removing dirt, debris, and contaminants by using methods such as grinding, vacuum cleaning, or wire brushing.
2. Ensure the surface is dry and stable, free of any oils, grease, or other contaminants that could affect adhesion.

Crack Filling:

3. For cracks ranging from 3mm to 20mm in width, inject or fill the crack with PROBOND 1100PS. Use a pressure injection system or gravity feed method, ensuring the crack is fully filled with the adhesive for optimal bonding and repair.
4. For larger voids, fill the crack in layers if necessary to ensure proper adhesion and avoid air pockets.

Bonding:

5. Ensure uniform bonding of the surrounding material as the adhesive fills the crack. For structural repairs, allow the adhesive to cure and bond the substrates effectively.

Curing:

6. Allow the adhesive to fully cure according to the recommended time, typically 24-48 hours, depending on ambient temperature and humidity. Ensure the repaired area remains undisturbed during this period.

Finishing:

7. After curing, smooth the surface by sanding or grinding any excess material to achieve a flush finish.
8. Additional patching or coating can be applied if needed to restore the surface's appearance and integrity.

Spall Patch Application

a. Begin by grinding the damaged area to a depth of at least 13mm but no greater than 16mm, ensuring a consistent depth throughout. Avoid feathered edges by cutting around the spall into sound concrete using a grinder or circular saw with a diamond or concrete abrasive blade.

b. Thoroughly clean the spalled area, removing all debris, dust, and contaminants.

c. Prepare a mixture of **PROBOND 1100PS** according to the manufacturer's instructions.

d. Fill the spalled area with the prepared **PROBOND 1100PS** mixture, slightly overfilling to ensure a flush finish.

e. Trowel the filled area flush with the surrounding surface, ensuring a smooth and even finish.

f. Allow **PROBOND 1100PS** to cure fully before subjecting the repaired area to traffic or further treatment

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Membrane Termination

- Prepare the termination (reglet) appropriately.
- Install the FORSPEC Sheet Membrane according to instructions.
- Fill the termination (reglet) with **PROBOND 1100PS**.
- Ensure the filling slightly exceeds the finished surface level.
- Trowel the filled termination flush.
- Review the specific FORSPEC Sheet Membrane product datasheet for detailed instructions.
- **PROBOND 1100PS** can also be used for fixing the
- Over Flashing termination detail.
- Allow **PROBOND 1100PS** to fully cure before conducting any flood testing.

Curing PROBOND

- 1100PS typically cures within 3 hours after application at a temperature of 24°C. Following this duration, **PROBOND 1100PS** can undergo mechanical grinding, be coated with paint or other architectural coatings, and is ready for full traffic.

Application Temperature

- The substrate and ambient air temperature should range between 5°C and 35°C during application. If the work environment or substrate temperature drops below 21°C, it is advisable to condition the product to a temperature between 21°C and 24°C before use. Extremely cold product may thicken, while excessively warm conditions can accelerate the reaction process.

Packaging PROBOND 1100PS

- 600mL Cartridges

Clean Up

- After use, clean tools and equipment with a mild solvent to prevent epoxy from hardening. Ensure epoxy does not cure on tools and equipment; cured material must be removed mechanically.

Shelf Life

When stored in the original unopened packaging, **PROBOND 1100PS** has a shelf life of 24 months. Store in a dry place at 23°C and 50% relative humidity for optimal longevity.

Limitations

- Product may discolor from UV exposure.
- Sanding before overcoating with paint or other architectural coatings enhances adhesion. Conduct a small test area before proceeding with the entire project.
- Avoid solvent-based coatings when overcoating with paint or other architectural coatings.
- Do not thin the product with solvents, as this inhibits curing.
- **PROBOND 1100PS** is not suitable for repairing cracks subject to movement.
- Designed for small patch repairs only; excessive heat may occur in deeper or larger repair areas, potentially causing swelling, smoking, and cracking.
- Prior to any substrate preparation, installation, or finishing methods involving **PROBOND 1100PS**, be aware of potential risks and use appropriate personal protective equipment (PPE). Consult substrate manufacturers for Safety Data Sheets (SDS) as needed.

Data Sheet

This Technical Data Sheet (TDS) and Material Safety Data Sheet (SDS) are subject to revision as necessary to ensure compliance with relevant Australian Standards and incorporate technological advancements. It is crucial to read the most current versions of the SDS and TDS before use, as application and performance data may be updated. For the latest technical information, please contact Forspec Protective Coatings at (02) 8021 3517 or email info@forspec.com.au to request a copy. The information provided is representative but does not serve as a comprehensive specification. For specific projects, we recommend consulting directly with the company for tailored specifications..

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