

APTC Proflex FC PU™

Fast curing polyurethane sealant

Description

APTC Proflex FC PU is a high performance, fast curing polyurethane sealant and adhesive. The non slumping formulation has a fast tack-free time and cure rate, with high bond strength and $\pm 25\%$ movement capability. It is suitable for both internal and external bonding applications, demonstrates excellent weatherability and is chemical and pick resistant.

APTC Proflex FC PU is easy to apply and will adhere to most common building substrates.

Uses

APTC Proflex FC PU is suitable for use in the following applications and areas:

- Sealant — sealing of construction and expansion joints, floor and concrete joints, vertical joints on precast concrete, plasterboard and other building substrates, perimeter sealing of door and window frames
- Adhesive—for building and construction applications

Areas of use:

- Trafficable areas—stairs, roads, runways, pavements
- Pick resistant areas—prisons, cells, schools
- Chemical resistant areas—service stations, hangers, bunded areas
- Potable water tanks

Suitable substrates: concrete, most metals, natural stone, bricks, block, GRC and fibreglass

Features & Benefits

One component—easy to use	Water potable
Non-slumping & fast curing	UV stable
High modulus—very high bond strength	Excellent acoustic properties
Pick resistant	Excellent adhesion to typical building substrates
Resistant to chemical and fungal attack	Paintable with most paints

Specifications and Technical Properties

	METHOD/STANDARD	
APPEARANCE & CONSISTENCY		Non– sag smooth thixotropic paste
CURING SYSTEM		Moisture cure
SKIN FORMATION	(25°C / 50%R.H.)	≈45 minutes
CURING RATE	(25°C / 50%R.H.)	≈3mm/24h
HARDNESS	(Shore A)	≈45
TEMPERATURE RESISTANCE		-40°C to +70°C
APPLICATION TEMPERATURE		+5°C to +35°C
TENSILE STRENGTH		≈ 2.5 to 3.0N/mm ²
JOINT MOVEMENT CAPABILITY		±25%
MODULUS 100%		≈ 0.35MPa
ELONGATION AT BREAK		> 450%
VOC		78g/litre

Surface Preparation

All surfaces and substrates must be clean and sound. Any loose particles, grease, oils, silicones, curing compounds or laitance must be removed before application of the product.

- Porous substrates: clean by grinding, saw cutting or blasting (sand or water)
- Non– porous substrates: clean with a solvent or by mechanical means. Wipe solvents with a clean dry cloth—do not allow solvents to air dry or evaporate.

All dust and loose particles should be vacuum cleaned before application begins.

Priming:

Proflex FC PU will adhere to standard concrete and mortar without the use of a primer. Vertical expansion joints in porous substrates such as concrete or masonry that will not be submerged or subject to periodic immersion will not requiring priming if clean, dry and uncontaminated.

Porous substrates subject to immersion/submerged and all non-porous substrates (plastic and metallic) will require priming before the application of **APTC Proflex FC PU**. Please consult with APTC Australia for recommendations of suitable primers.

Joint design:

Minimum width: 5mm

Maximum width: 20mm on vertical substrates; 50mm on horizontal substrates

Minimum depth: 6mm

Refer to APTC Australia for technical advice on joint design.



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For best performance and maximum adhesion the following depth to width ratio should be applied:

Joint size	Depth to width ratio
Up to 12mm	1:1
12mm to 50mm	1:2

Avoid 3 sided adhesion. If there is potential for 3 sided adhesion use a backing rod such as open cell polyurethane or closed cell polyethylene foam rod to eliminate.

All backing rod materials must be installed prior to priming and before application begins.

Pre-testing for adhesion

Where adhesion is critical to the success of the project, APTC Australia requires preliminary pre-testing of adhesion and compatibility prior to the commencement of application.

Pre-testing for adhesion is intended to eliminate potential field problems. Variability on the quality, type, cured properties and surface contaminants can affect adhesion. Pretesting will aid in determining the proper surface preparation method.

Application

APTC Proflex FC PU can be applied using a quality sausage applicator gun.

Cut nozzle to the desired width and cut crimp on sausage before placing into applicator gun. **Do not cut the tip of the nozzle smaller than 5mm wide.**

Sealant applications:

- Extrude the sealant firmly into the joint ensuring it completely fills all cavities and wets out both sides of the joint and the backing material.
- Tool sealant off before skinning to achieve a smooth, clean finish. Clean/wipe excess sealant using a suitable sealant tool. Masking tape can be used but must be removed before sealant begins to skin.

Wet tooling techniques using water, solvents or a soapy solution should not be used to apply or finish Proflex FC PU.

Adhesive applications:

Proflex FC PU does not need to be applied to both surfaces however both surfaces must be prepared according to instructions.

- Apply product in beads to the prepared substrate before bringing together to be bonded
- If no mechanical fixing is used in conjunction with adhesive, clamping will be necessary until full cure is achieved. Only use enough sealant to achieve an adequate bond



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Application cont'd:

- Do not apply excessive amount of sealant. Use only enough sealant to achieve an adequate bond
- Materials being adhered can be bonded immediately or left open for up to 15 minutes before bonding
- Remove any excess adhesive with a dry cloth or solvent based wipe before curing. If leaving adhesive exposed, tool off with a suitable spatula or putty knife for a smooth, clean finish.

Clean up

Fresh/wet sealant can be cleaned from tools using a citrus based or similar wipe.

Once cured, sealant can only be removed through mechanical means.

Finishings/painting

APTC Proflex FC PU can be painted after 24 hours with water borne coatings and most epoxy flooring systems.

- To avoid distortion of the coating/ paint film, the coating or paint must be able to accommodate the expected movement capabilities of the sealant.
- Coatings with a high solvent content such as gloss enamel may cause a reaction resulting in a tacky surface developing. Contact APTC Australia for recommendations on suitable coatings.

Packaging & Shelf Life

Packaging: 600ml foil sausages

Colours: Concrete Grey

Storage/shelf life: 12 months from production date in original unopened packaging. Store in a cool and dry place away from direct sunlight at temperatures between 5°C and 30°C.

Limitations

APTC Proflex FC PU is not suitable for use in the following applications:

- In swimming pools, spas or other highly chlorinated areas
- Onto or near bitumen products
- Internal or external sealing below the waterline
- Mirror backs, reflective glass or surfaces coated with Teflon
- Glazing applications subject to UV light or direct sun exposure
- **APTC Proflex FC PU** will not adhere to polyethylene, polypropylene or PTFE
- **APTC Proflex FC PU** may stain or discolour absorptive substrates such as natural stone, limestone or granite. Pre-test all absorptive substrates before application to determine standard of appearance.



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Limitations cont'd:

- The suitability of the product for each intended use must be determined by the purchaser prior to the application of the sealant.

Health & Safety

APTC Australia supports best practice in material handling; gloves, mask, safety goggles and protective clothing should be worn when handling and using this product. Ensure adequate ventilation when applying.

Product may cause an allergic skin reaction. Keep out of reach of children.

SKIN: If product comes into contact with the skin, wash off with warm soapy water. **SWALLOWED:** If swallowed do NOT induce vomiting. Give a glass of water and seek medical advice. **EYES:** In case of contact with eyes, hold eyes open and rinse with clean water for at least 15 minutes. Seek medical advice. **INHALATION:** May cause asthmatic symptoms or breathing difficulties if inhaled. Remove from contaminated area and seek medical advice.

If poisoning occurs contact a doctor or Poisons Information Centre Ph 13 11 26 (Australia).

Spills/leaks: Absorb with sand or soil. Collect and seal in properly labelled container and dispose of according to local, regional or national guidelines.

Fire: If involved in a fire use water fog/fine water spray, alcohol resistant foam, standard foam or dry agent such as carbon dioxide or dry chemical powder.

Safety data sheets (SDS) for this product are available on the APTC Australia website www.aptcaust.com.au. Read the TDS and SDS carefully before using any product.

Disclaimer

The information and recommendations provided regarding the application and use of APTC Australia products are based on APTC Australia's current knowledge and experience, assuming proper storage, handling, and application according to our guidelines. However, due to variations in materials, substrates, and site conditions, we cannot guarantee any warranties related to merchantability or fitness for a particular purpose, nor assume any liability based on this information, written recommendations, or other advice. Users must assess the suitability of the products for their specific application and purpose. APTC Australia reserves the right to modify product properties at any time. Third-party proprietary rights must be respected. All orders are subject to our current terms of sale and delivery. For the most up-to-date product information, users should refer to the latest version of the local product data sheet, which can be provided upon request.

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