



F1 EXPRESS

DESCRIPTION

F1 EXPRESS is a one part, rapid set, polymer modified, flexible tile adhesive, designed to withstand thermal, vibrational and shrinkage movement in the substrate.

USES

- F1 EXPRESS can be used on walls and floors, in interior and exterior applications.
- F1 EXPRESS is classified as a C1S2E adhesive system, in accordance with AS4992.1
- F1 EXPRESS may be used to fix tiles onto the following substrates. Refer to Surface Preparation section for appropriate treatment prior to tiling:
 - plasterboard
 - fibre cement sheeting
 - timber floors (tongue & groove, particleboard, plywood)
 - concrete, including early age concrete (7 days min)
 - cement renders/screeds, including early age renders and screeds (24 hours min)
 - brickwork (clay bricks must be rendered)
 - ALC (Autoclaved Lightweight Concrete) blocks
 - Cement blocks
 - Davco liquid applied waterproofing membranes, as well as other acrylic membranes
 - existing ceramic tiles
 - existing vinyl tiles
- F1 EXPRESS is recommended for the fixing of the following tile types:
 - Ceramic tiles
 - Glass mosaics
 - Fully vitrified tiles
 - Porcelain tiles
 - Natural Stones, with the exception of moisture sensitive stones such as green marble and reconstituted marble
 - Terracotta, slate, and quarry tiles.
- F1 EXPRESS dries to a grey colour. When using F1 EXPRESS with translucent/ absorbent tiles, the colour of the adhesive must be considered, so as to avoid discolouration problems.

FEATURES & BENEFITS

- F1 EXPRESS is one-part flexible adhesive and as such is designed especially for tiling onto surfaces subject to movement and vibration such as fibre cement sheeting, gyprock plaster and particular timber substrates. Refer to surface preparation section for allowable substrate movement.

- Provides a water-resistant bond, and as such is suitable for use in areas exposed to moisture (but not permanent immersion). This also makes F1 EXPRESS suitable for interior and exterior applications.
- F1 EXPRESS exhibits a rapid set time, meaning it is ready to accept traffic and be grouted, sooner than normal adhesives.
- F1 EXPRESS will reduce sound transmission, making it suitable for use in adhering tiles over Davco Acoustic Underlay.
- F1 EXPRESS has excellent adhesion properties, making it suitable for adhering tiles to a wide variety of surfaces, including Davco liquid applied waterproofing membranes, and other acrylic membranes.

SURFACE PREPARATION

General

- All surfaces must be structurally sound, dry, clean and free from structural movement, oil, grease, wax, laitance, curing compounds and any other loose or contaminating materials.

Building Boards

- All building boards (eg plasterboard and FC sheet) must be flat and firmly fixed according to the manufacturer's instructions and relevant Australian Standard(s).
- Surfaces should be primed with Davco Ultraprime prior to tiling.

Timber

- Refer to the installation instructions from the timber floor manufacturer. If their literature states the floor is suitable for direct fixing of ceramic tiles, then proceed as follows, otherwise refer to their instructions on floor preparation, prior to fixing ceramic tiles.
- For tiling applications over timber frame constructions the load deflection/deformation in the floor must not exceed 1/360 of the span, when measured under a concentrated load of 140Kg. For timber joists that are at 450mm centres, the substrate must not deflect/deform more than 1.2mm under a concentrated load of 140Kg.
- Timber substrates **MUST** be sanded and then primed using Davco Ultraprime. Ultraprime is coloured blue, and contains an ultra violet light reflector, making it easy to identify if the primer has been used.
- For treated timbers, hardwood timbers or timbers which exude resins/tannins, initially install a fibre cement sheet tile underlay.



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Concrete

- New concrete must be allowed to cure for at least 7 days and should have a wood float or broom finish. Allow additional time for drying of slabs in cold temperatures, as these conditions will delay adhesive cure. Ensure the slab is surface dry before tiling.
- Steel trowel finished concrete must be acid etched or mechanically abraded prior to tiling.
- Old concrete surfaces must be thoroughly cleaned prior to tiling, and should have a wood float or broom finish.
- Make sure all release agents are removed from concrete surfaces, especially on tilt-up slabs.
- If there is a concrete surface subject to rising damp, contact the ParexDavco (Australia) Pty Ltd Technical Advisory Line on 1800 653 347 for directions.

Render/Screeds

- Newly rendered/screeded surfaces must be allowed to cure for at least 24 hours and have a wood float finish. Allow additional time for drying of wet screeds in cold temperatures, as these conditions will delay adhesive cure. Ensure the screed is surface dry before tiling.
- Old rendered/screeded surfaces must be thoroughly cleaned prior to tiling and have a wood float finish.

ALC Blocks

- Remove all loose particles with a broom or brush.
- Prime with a diluted (1:1 with water) application of Davco Ultraprime and allow the primer to dry. Then prime a second time with neat Ultraprime, and allow to dry before tiling.

Existing Ceramic Tiles

- Existing ceramic tiles, if they are sound and securely fixed, can easily be prepared for tiling via the use of Davco Ultrabond. Refer to the Ultrabond data sheet for further details and suitability.
- Alternatively, they can be scabbled or mechanically roughened to remove at least 80% of the tile surface. Clean off any contamination before tiling.

Existing Vinyl Tiles

- Existing vinyl tile surfaces, if they are sound and securely fixed, can easily be prepared for tiling via the use of Davco Ultrabond. Refer to the Ultrabond data sheet for further details and suitability. Do not tile over cushioned or foam backed vinyl flooring.

Miscellaneous Surfaces

- Painted surfaces must be scabbled/abraded to expose at least 80% of the original substrate. Alternatively, if they are sound, and free of any flakiness, they can easily be prepared for tiling via

the use of Davco Ultrabond. Refer to the Ultrabond data sheet for further details and suitability.

- Old adhesive from vinyl, carpet or cork flooring can be easily tiled over using Davco Ultrabond. Refer to the Ultrabond data sheet for further details and suitability.
- Certain non-absorbent/contaminated surfaces can easily be prepared for tiling via the use of Davco Ultrabond. Refer to the Ultrabond data sheet for further details and suitability.

Movement joints should be provided as follows:

1. Over movement joints in the background.
2. At a junction between different background materials
3. At fixtures interrupting the tile surface e.g. columns.
4. At internal vertical corners.
5. Around the perimeter of the tiling system.
6. At a maximum of 5 metre intervals in a grid pattern.

Note: Movement joints should go right through the tile adhesive bed to the background and be kept free from dirt and adhesive droppings. Movement joints must not be less than 6mm nor greater than 10mm wide. All movement joints that are 6mm wide can be filled with Davco *Sanitized*[®] Colorcaulk. For wider applications use Davco Davsil or polysulphide and polyurethane type fillers.

MIXING

- F1 EXPRESS is a one-part adhesive for on-site mixing with water only.
- The mixing ratio by volume is approximately 3 parts powder to 1 part water.
- For a 15kg bag of F1 EXPRESS powder, the mixing ratio is 5.0 – 5.5lt of water. This may vary slightly due to workability and temperature variation.
- Add the powder slowly into the water while mechanically stirring to ensure a uniform mix result.
- Allow the mixture to stand for 10 minutes, remix, then use the adhesive.

APPLICATION

- Spread the adhesive onto the substrate using a 6mm x 6mm notched trowel for the installation of wall tiles up to 150mm x 150mm.
- For the installation of floor tiles or wall tiles larger than 150mm x 150mm use a 10mm x 10mm to a 12mm x 12mm notched trowel.
- A 12mm x 12mm notched trowel must be used for tiling on/over all timber frame construction floors, except when dealing with mosaic tiles.
- A 6mm x 6mm notched trowel can be used to lay mosaic tiles.
- Tiles with lugs, grooves or an uneven back, must initially be butter coated with the adhesive, in



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addition to the adhesive being trowelled onto the substrate.

- When laying tiles which are larger than 400mm x 400mm in size, Davco recommend the use of a 12mm x 12mm notched trowel as a minimum – back buttering of the tile may also be necessary to ensure greater than 90% coverage is achieved. Care needs to be taken to ensure the adhesive does not skin prior to bedding the tile.
- For wall tiling a minimum final bed thickness of 2mm is necessary, whilst for floor tiling a minimum final bed thickness of 3mm is necessary, except on/over timber or fibre cement sheet type floors where a minimum of 4mm is necessary.
- Do not spread more than 1m² of adhesive at any one time.
- Press tiles firmly into position before the adhesive skins, ensuring that all the tiles are well bedded and that no voids occur under the tiles.
- Occasionally, in order to ensure that full coverage is being maintained, a tile should be removed, the adhesive coverage noted and the tile be relaid accordingly.
- Once the tiles have been laid, they must not be disturbed or trafficked upon for 4-5 hours at 20°C. After this time, the tiles can be walked upon, in readiness for grouting.

GROUTING

- Grouting can be carried out 4-5 hours after the completion of tiling.
- Use the Davco grout that best suits the tiling installation. Refer to the Davco Adhesive and Grout Selection Guide for further information.
- To enhance colour, increase water resistance and flexibility of the grout, use Davco Grout Additive.
- Davco Grout Additive must be used with the grout when grouting over timber or fibre cement sheeted floors, to minimise the likelihood of the grout cracking/powdering.
- Allow 24 hours after grouting before putting the area into service.

PRECAUTIONS

- Do not apply F1 EXPRESS in temperatures above 35°C or below 5°C.
- Do not allow the adhesive to skin prior to laying the tiles. If the adhesive skins, remove and dispose of it, then re-apply fresh adhesive.

- When using F1 EXPRESS externally or in wet areas ensure adequate drainage exists, so that water does not pond on the tile surface.
- Do not use F1 EXPRESS for the tiling of areas where continual water immersion occurs i.e. swimming pools, spas, etc.
- Do not add extra water to F1 EXPRESS once it starts to harden in the bucket. This will destroy the cohesion of the mix. Stiffening F1 EXPRESS must be discarded.
- F1 EXPRESS is not suitable for installations that will experience very heavy foot traffic or high point loads.
- F1 EXPRESS is unable to absorb deflection/deformation that exceeds 1/360 of the span i.e. for timber joists which are at 450mm centres, the substrate must not deflect/deform more than 1.2mm, when measured under a concentrated load of 140Kg.
- F1 EXPRESS will take longer to cure when applied over surfaces with low porosity (ie. waterproofing membranes) or when used in conjunction with tiles that have low porosity (porcelain, vitrified).
- F1 EXPRESS will take longer to cure when applied over 24 hours screeds and 7 day old slabs in colder temperatures.
- For other uses or the use of F1 EXPRESS over substrates/situations not mentioned in these instructions, contact your ParexDavco (Australia) Pty Ltd state office or call the Technical Advisory Line on 1800 653 347,
- Being cement based, F1 EXPRESS is alkali in nature, which can cause dermatitis. Thus when using F1 EXPRESS it is recommended that applicators wear PVC or similar gloves and safety goggles.
- For a full MSDS on this product, contact your ParexDavco (Australia) Pty Ltd state office.

COVERAGE

A 15kg bag of F1 EXPRESS will cover:

- Approximately 5m² using a 12mm x 12mm notched trowel,
- Approximately 7.5m² using a 10mm x 10mm notched trowel

- Approximately 12m² using a 6mm x 6mm notched trowel.



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CLEAN UP

- Remove any excess adhesive from the face of the tiles with a damp cloth, while the adhesive is still wet.
- Clean tools and equipment with water before the adhesive dries.

PACKAGING

F1 EXPRESS is available in:

- 15kg bags

SHELF LIFE

F1 EXPRESS has a shelf life of up to 12 months in unopened containers and bags, stored in a cool, dry elevated place.

TECHNICAL DATA

Properties:

Classification (AS4992.1):	C1S2E
Appearance (when mixed):	Grey paste
Specific Gravity of Mix:	0.95kg/litre
Pot Life at 20°C:	Approx 1 Hour
Open Time at 20°C:	Approx 40 mins
Adjustment Time at 20°C:	Approx 30 mins
Curing Time at 20°C:	4-5 hours
Time before grouting at 20C	4-5 hours
Performance to AS4992.2:	
Tensile Strength at 28 days:	> 1.0MPa
Tensile Strength after water immersion:	> 0.5MPa
Tensile Strength after heat ageing:	> 1.0MPa
Tensile Strength after freeze thaw:	> 0.5 MPa
Transverse Deformation:	20 mm

damage arising from incorrect usage. All workmanship must be carried out in accordance with AS 3958.1 - 1991.

The information contained herein is to the best of our knowledge true and accurate. No warranty is implied or given as to its completeness or accuracy in describing the performance or suitability of the product for a particular application. Users are asked to check that the literature in their possession is the latest issue.

PAREX DAVCO

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DISCLAIMER

The use of this product is beyond the manufacturer's control, and liability is restricted to the replacement of material proven faulty. The manufacturer is not responsible for any loss or