



# Technical Data Sheet



**PALACE FLEXI-SET** is a pourable thick-bed cement-based, highly polymer modified, ceramic tile adhesive, for fixing all types of ceramic floor tiles, particularly heavy-duty natural stone and slate, as well as porcelain and vitrified tiles with heavily studded or profiled backs. **PALACE FLEXI-SET** helps to ensure the 100% wet contact needed for large format flooring tiles in either interior or exterior locations and including applications where under-floor heating is installed.

- Can be laid to a mean bed depth of up to 25mm.
- Fixes large format vitrified, porcelain & natural stone floor tiles
- Readily pourable when mixed and trowels out to a deep bed finish
- Highly polymer modified for fixing to heated sub-floors
- Suitable for use in Interior, Exterior & fully immersed locations

## Description:

**PALACE FLEXI-SET** is a pourable tile adhesive for floors, ideal when fixing large format ceramics, porcelain and vitrified tiles, in dry or wet interior and exterior locations. It is rapid-setting in three hours and highly polymer modified and can be laid up to a mean bed depth of 25mm in a single application. **PALACE FLEXI-SET** is ideal for underfloor heating, fully immersed wet areas, heated screeds and installations subject to limited movement and vibration. **PALACE FLEXI-SET** is recommended when fixing large format tiles and natural stone onto most types of substrates and when laying tiles/slabs of irregular thickness. **PALACE FLEXI-SET** is a fast-setting polymer modified floor tile adhesive, which conforms to BS EN 12004 Type C, Class 2FT) and is available in **GREY & WHITE**.

## Surface Preparation:

The substrate must be clean, firm and free of dust, dirt, oil, grease and loose flaking coatings. It must also be structurally sound and strong enough to support the expected traffic loading. **PALACE FLEXI-SET** can be applied to dry or damp surfaces however moisture sensitive materials must be dry and remain dry after fixing. Worn or porous surfaces should be sealed with **PALACE TILERS PRIMER** diluted as 1 to 3 with water. **PALACE FLEXI-SET** can be applied to Tile Backer boards over-laid onto a suitably rigid structure, such as well-braced 15mm waterproof ply-board screw fixed at 300mm centres to supporting battens. Applications over sub-floor heating should allow 28 days before switching the heat on. **PALACE FLEXI-SET** is not recommended for application directly onto tongue and groove timber floorboards or floating plywood floors. Do not apply onto bare, un-sealed gypsum plaster or anhydrite floor screed before first priming this type surface with two coats of neat **PALACE TILERS PRIMER** the first diluted 1 to 1 and the second neat.

## Mix Preparation:

**PALACE FLEXI-SET** should be added to water in a clean container whilst mechanically stirring and mixed thoroughly to give a soft, slump-free, easily worked mortar.

The recommended mixing proportions by volume are approximately 4 litres per 20kg sack. The consistency of the paste can be adjusted with slight additions of water or powder at the initial mixing stage, however part-used adhesive should never be “freshened up” with later water additions but should always be discarded once it appears to lose its’ workability. In ideal conditions (20°C room temperature), **PALACE FLEXI-SET** will remain workable for 40 to 60 minutes and then reach final set after about 2 to 3 hours. The workable open time will be shortened in higher temperatures and mix volumes should be reduced to work in smaller areas per batch.

## Application Method:

For fixing ceramic tiles or mosaics, use a large flooring grade notched trowel to give a ribbed mortar bed on the substrate, into which the tiles are firmly bedded with a twist and slide action to ensure full contact. When fixing large format tiles empty the adhesive onto the floor surface and comb to required bed thickness ensuring the ribs of adhesive all run in one direction. The adhesive may be applied in a bed thickness from 3mm up to 25mm. Use a 10mm x 10mm notch at 16mm centres to form a ribbed bed. The position of the tiles can be adjusted up to 10 minutes after initial fixing. Open time of the exposed mortar bed is approximately 20 minutes, depending on surface porosity and site temperatures. It is recommended that tiles with raised or studded back profiles, (or in situations where dampness is likely after tiling), should be back-buttered to ensure solid bed fixing. Do not trowel out an area of adhesive greater than can be tiled over within a 10-minute period. Do not apply any cement-based adhesive onto bare, unsealed gypsum plaster or anhydrite screeds and do not allow adhesive residues to set & harden on the tile face. Do not mix or apply this adhesive when air or ground temperatures are forecast to be below 5°C or greater than 35°C at any time during the first 24 hours after application.

EN ISO 14001



EMS 85788

EN ISO 9001



FM 01010

EN ISO 18001



OHS 596309

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## Coverage:

When fixing on a level, even surface using a 10mm notched trowel, **PALACE FLEXI-SET** will cover at a rate of about 1.7kg per mm, per sq. mtr, thus for heavy-duty, studded tiles at a 10mm bed depth the adhesive demand will be approximately 17kg per square metre and at the maximum 25mm bed depth will require up to 42.5kg per square metre.

## Grouting:

Grouting may proceed as soon as the tile bed is sufficiently firm, which for **PALACE FLEXI-SET** will be after 3 - 4 hours at room temperature. This period however will be extended in cold conditions. When the adhesive is fully set, wall & floor joints can be grouted using **PALACE COLOUR-LOCK GROUT** or **PALACE ANTI-MOULD GROUT**, however on wider flooring applications, joints of up to 20mm wide can be grouted using **PALACE WIDE JOINT FLEXI FLOOR TILE GROUT**.

## Storage & Packaging:

**PALACE FLEXI-SET** is supplied in 20kg multi-ply, moisture resistant paper sacks and has a storage life of not less than 12 months if stored in dry, un-opened conditions. Should further technical information be required, contact the Palace Technical helpline on 0151 486 6101.

## Health & Safety:

Always ensure that appropriate PPE is worn when mixing & applying this product to ensure protection from airborne dust and skin contact with the mixed liquid product. Wash hands after use and launder stained clothing. Do not consume food when working with this material and keep children & animals away from any possible risk of contact. A complete **PALACE** material safety data sheet is available on request or online at [www.palacechemicals.co.uk](http://www.palacechemicals.co.uk)

## Quality & Environment:

All Palace Chemicals products are manufactured under a BSI accredited ISO 9001:2015 Quality Management System, along with an ISO 14001 Environmental Management system continually working to reduce our carbon

## Disclaimer:

The information provided by this Technical data sheet is given in good faith and is to the best of our current knowledge true and accurate, however it is given without guarantee, as conditions of use and workmanship involved are both beyond our control. All information supplied is subject to the company's terms and conditions of sale, copies of which are available on request.  
footprint.

## Technical summary:

<b>Unit size:</b>	20kg
<b>Colours:</b>	White & Grey
<b>Mean bed depth:</b>	3mm - 25mm
<b>Time till ready to grout:</b>	3 hours*
<b>Working pot life:</b>	40 – 60 minutes*
<b>Initial Set time:</b>	2 hours at 20°C*
<b>Application Temperatures:</b>	5 – 25°C

- *Dependent on temperature substrate and site conditions*

## Approved receiving surfaces:

- ✓ Concrete
- ✓ Sand/cement screed
- ✓ Tile backer boards
- ✓ Flooring grade asphalt
- ✓ Cement faced fibre boards
- ✓ Anhydrite /gypsum-based screeds
- ✓ Tile on Tile\*
- ✓ Fixing over existing Vinyl tiles
- ✓ Sand/cement floor screeds
- *Must be securely fixed*

## Performance test data:

EN 12004 – C2F Improved, fast setting cementitious adhesive	
Early Tensile adhesion strength	> 0.5 N/mm <sup>2</sup>
Initial Tensile adhesion strength at 20 mins open time	> 0.5 N/mm <sup>2</sup>
Initial Tensile adhesion strength	> 1.0 N/mm <sup>2</sup>
Tensile adhesion strength after heat ageing	> 1.0 N/mm <sup>2</sup>
Tensile adhesion strength after freeze thaw cycles	> 1.0 N/mm <sup>2</sup>
Tensile adhesion strength after water immersion	> 1.0 N/mm <sup>2</sup>
Reaction to Fire	NPD

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