



# Technical Data Sheet



**PALACE SUPER-FLEX S2 LIGHTWEIGHT** is a unique rubber reinforced & polymer modified adhesive, with excellent application mix yield when mixed with water for fixing ceramic floor and wall tiles, including mosaics, porcelain and vitrified tiles onto challenging surfaces in interior & exterior locations. Its' Dust Reduced formula minimises spillage & surface contamination whilst it is suitable for fixing onto tile backer boards, tongue and groove floorboards and well-prepared floating floors including where sub-floor heating is installed.

**Conforms to BS EN 12004 – C2FTE-S2**

- **Highly polymer modified to tolerate slight movement & deformation.**
- **Fixes all types of tile to substrates which may be prone to vibration**
- **Mixes to give a lightweight high yield easy to apply paste.**
- **Dust-Reduced formula minimises airborne powder contamination**
- **Fixes tiles where all types of sub-floor heating are installed**

## Description:

**PALACE SUPER-FLEX S2 LIGHTWEIGHT** is a highly polymer reinforced cement-based, fast setting, thin-bed wall & floor tile adhesive, which conforms to BS EN 12004 Type C, Class 2FTE-S2). It is recommended when fixing ceramic and stone FLOOR and WALL tiles, in some of the most heavily trafficked interior & exterior locations where movement & vibration can be expected. **PALACE SUPER-FLEX S2 LIGHTWEIGHT** has a 1-hour working pot-life with an extended “wet-tack” open time and rapidly cures to an initial set at 2 hours which allows foot traffic after three hours. **PALACE SUPER-FLEX S2 LIGHTWEIGHT** cures to a high bond strength, with excellent water-resistance and is also recommended in frequently wet & immersed area

## Surface Preparation:

The substrate must be clean, dry, 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. Wood -based surfaces, plywood, panel-boards and tongue & groove floorboards should be dry, sealed on all exposed faces and edges and then primed using **TILERS PRIMER SBR** diluted 1 to 1 with water. Timber boarding should then be over-laid with Tile Backer boards, screw fixed to support battens at 300mm centres to provide a dimensionally stable background as described in BS 5385 Part 1. All boards must be level, showing no edge protrusions and be fixed in place with a 0.5 to 1mm gap to avoid expansion stresses between the boards and around the wall perimeters. 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 SUPER-FLEX S2 LIGHTWEIGHT** 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 5.5 litres of water per 15kg. 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 when it loses its' workability. In ideal conditions (20°C room temperature), **PALACE SUPER-FLEX S2 LIGHTWEIGHT** will remain workable for up to 1 hour at 20°C and then reach final set after 3 - 4 hours, after which time it is sufficiently well cured to permit grout application on both walls & floors.

## Application Method:

For fixing ceramic tiles or mosaics, use a 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. Use a 3mm x 3mm notch at 6mm centres for mosaics and thin flat backed wall tiling, a 5mm x 5mm notch at 10mm centres for general wall tiling and 10mm x 10mm notch at 16mm centres for floor tiling. The position of the tiles can be adjusted up to 10 minutes after initial fixing. Open time of the exposed mortar bed is approximately 30 minutes and it is recommended that tiles with raised or studded back profiles, 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 30-minute period. Surfaces, such as tamp-rutted concrete and masonry block-work, that are uneven should be prepared with **PALACE SELF-LEVEL** floor smoothing & levelling compound and when sufficiently firm (24 – 48 hours later), followed by an application of **PALACE SUPER-FLEX S2 LIGHTWEIGHT** adhesive. 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

**PALACE CHEMICALS Ltd**

Speke Hall Industrial Estate;  
Speke; Liverpool; L24 1YA  
Tel: 0151 486 6101 – Fax: 0151 448 1982  
e-mail: sales@palacechemicals.co.uk





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## Coverage:

When fixing on a level, even surface using a 10mm notched trowel, **PALACE SUPER-FLEX S2 LIGHTWEIGHT** will cover at a rate of about 3.0 – 4.0kg per sq. mtr for heavy-duty, studded tiles. When applying wall tiles, the product will cover at about 1.8 - 2.2 kg per sq. mtr.

## Grouting:

Grouting may proceed as soon as the tile bed is sufficiently firm, which for **PALACE SUPER-FLEX S2 LIGHTWEIGHT** will be after 3 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 SUPER-FLEX S2 LIGHTWEIGHT** is supplied in 15kg 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 footprint.

## 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.

## Technical summary:

Unit size:	15kg
Colours:	Grey
Mean bed depth:	Up to 6mm
Time till ready to grout:	4 hours*
Working pot life:	1 hour*
Initial Set time:	3 hours*
Application Temperatures:	5 – 25°C

- \* Dependent on temperature substrate and site conditions

## Wall Tiles – substrate load limits:

Wall substrates should be strong enough to support the weight of the ceramic tile or natural stone to be installed and the weight of the associated adhesive bed. The maximum weight restrictions for wall substrates are given below:

Description	Kg/M2
Gypsum plaster ( <i>sealed with Tilers Primer</i> )	20.0
Gypsum plasterboard (12.5 mm)	32.0
Cement / sand rendering & Concrete	No limit
Lightweight foam-cored tile backer boards	60.0
Glass reinforced cement-based boards	50.0
Gypsum fibreboards	40.0
Other rigid tile backer boards	#

- # - Consult the manufacturer

## Approved receiving surfaces:

- ✓ Concrete
  - ✓ Sand/cement screed
  - ✓ Tile backer boards
  - ✓ Anhydrite / gypsum-based screeds
  - ✓ Firm and stable plaster (*sealed with TILERS PRIMER*)
  - ✓ Plasterboard
  - ✓ Sand/cement render
  - ✓ Green screeds
  - ✓ Existing tiles
  - ✓ Vinyl tiled surfaces
  - ✓ Concrete brick/block
- \* Must be securely fixed

## Performance test data:

EN 12004 – C2FTE-S2 Improved fast setting highly deformable cementitious adhesive with extended open time & reduced slip	
Early Tensile adhesion strength	> 0.5 N/mm2
Initial Tensile adhesion strength at 30 mins open time	> 0.5 N/mm2
Initial Tensile adhesion strength	> 1.0 N/mm2
Tensile adhesion strength after heat ageing	> 1.0 N/mm2
Tensile adhesion strength after freeze thaw cycles	> 1.0 N/mm2
Tensile adhesion strength after water immersion	> 1.0 N/mm2
Deformation	> 5.0mm
Reduced Slip	< 0.5mm
Reaction to Fire	NPD

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Speke Hall Industrial Estate;  
Speke; Liverpool; L24 1YA  
Tel: 0151 486 6101 – Fax: 0151 448 1982  
e-mail: [sales@palacechemicals.co.uk](mailto:sales@palacechemicals.co.uk)

