TECHNICAL DATA SHEET

NOV 2025 Ver 01 - PALFF 25.11.25

RAPID SETTING
FAST-FLEX
FLEXIBLE - FIBRE REINFORCED FLOOR LEVELLING COMPOUND

- **Level from 2-50mm in a single pour**
- **Tiling > 4 hours | Vinyl > 24 hours**
- **Self smoothing**
- **Suitable for use with underfloor heating**
- **Excellent flow for super smooth finish**

DESCRIPTION

PALACE FAST-FLEX is a rapid setting, flexible & fibre-reinforced, high strength, protein free, sub-floor smoothing underlayment, with a consistently level screed from 2mm up to 50mm thick. When mixed with water, **PALACE FAST-FLEX** floor leveller provides ideal properties for application over a comprehensive range of floor surfaces such as tamped or worn concrete and sand/cement floor screeds, plywood and dense impermeable surfaces. It is suitable for heated sub-floors. **PALACE FAST-FLEX** floor leveller provides improved adhesion to all types of substrate and a super-smooth level finish, ready to receive ceramic & porcelain tiles (4 hours), decorative vinyl, linoleum & carpet underlay (24 hours). This product is not suitable for external application.

TECHNICAL DATA

UNIT SIZE	20kg
COLOUR	Grey
FOOT TRAFFIC	3 hours*
READY FOR TILING	4 hours for a 5mm layer*
WORKING TIME	30 mins*
INITIAL SET TIME	1 hour @ 20°C*
APPLICATION TEMPERATURES	5 - 25°C
BED DEPTH THICKNESS	Up to 50mm
CLASSIFICATION	CT C30:F7

** Dependent on temperature, substrate and site conditions*

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SURFACE PREPARATION

The receiving floor surface must be hard, sounds and free from grease, dust, floor polish, laitance and loose deleterious materials such as worn surface coatings & plaster. Any adhesive & coatings residue must first be tested to determine if they are "moisture sensitive" and then removed if necessary. Prior to laying **PALACE FAST-FLEX** floor leveller, the base concrete or sand/cement screed should be tested to confirm that it has had sufficient time to dry out to reach a consistent moisture reading of <75% R.H. (<3.0% residual moisture content) - tested as per BS 8203:2017 - Annex B. Where it is not known whether an effective structural DPM is in place, or where the moisture test results show values in excess of 75% R.H (or >3.0% residual moisture content), then a liquid damp-proof membrane such as moisture suppressant **PALACE 1-COAT DPM** should be applied onto the prepared concrete sub-base, before it is over-laid with **PALACE FAST-FLEX** floor leveller. Although **PALACE FAST-FLEX** floor leveller will readily bond to most solid sub-floors, the application of a primer on highly porous surfaces will assist with maximising flow time & adhesion strength. **PALACE MULTI-PRIME** diluted 1:3 parts with water can be used for this purpose. Highly porous substrates may need a pre-coat of primer to the same dilution (allow to completely dry) and then a second coat diluted 1:1 with water before applying the levelling underlayment. Where Anhydrite Screed (Calcium Sulphate) based floors are being over-laid, the application of two coats of **PALACE MULTI-PRIME** (see Technical Data Sheet of **PALACE MULTI-PRIME** for more information) will be necessary to form a barrier & avoid any adverse interaction between the cement-based **PALACE FAST-FLEX** and the gypsum-based anhydrite screed beneath it.

Note: On very absorbent substrates, a third coat of **PALACE MULTI-PRIME** mixed 1:1 with water may be required.

MIXING & APPLICATION

PALACE FAST-FLEX floor leveller should be mechanically mixed when added to approximately 4.0 to 4.2 litres of clean water per 20kg to form a smooth, flowable & pourable levelling compound, which should be applied to the intended area without delay. Pour the freshly mixed levelling compound onto the prepared surface and use a straight edged steel trowel / float to ensure the compound is evenly spread into all areas and corners. The use of a spiked roller will assist in removing air bubbles and achieving a smooth finished in the limited time available. **PALACE FAST-FLEX** floor leveller will readily smooth trowel marks for about 20 to 30 minutes before it loses its flow properties and then begins to firm up rapidly. Clean all tools immediately after use with water.

COVERAGE

When laying on a level, even floor surface **PALACE FAST-FLEX** floor leveller will cover at a rate of 1.7kg / mm / per sq.mtr, such that a 20kg bag will cover 4.0 square metres of floor space at a level depth of 3mm. Setting & hardening times will vary depending on temperature and ventilation, which will be shortened at high temperatures and extended at low temperatures. Coverage rates are for guidance and are based on a smooth non-absorbent substrate, since surface porosity, texture and preparation efficiency can all affect the consumption of product.

PRECAUTIONS

Do not mix more material than can be poured, spread & laid within its 30 minutes flow time. **PALACE FAST-FLEX** should never be "freshened up" with further water additions, but should always be discarded once it appears to lose workability. Exceeding the recommended mix ratio will cause mix segregation, leading to a reduced strength in the cured screed and may result in surface dusting and cracking. **PALACE FAST-FLEX** floor leveller is for internal use only and should not be left open & exposed to floor traffic for a prolonged period, but should receive its final covering of tiles or decorative finish within 3 to 4 days after being placed. Do not apply at air & surface temperatures below 5°C or greater than 35°C at any time during the first 24 hours after application.

STORAGE

Keep the product sealed until use in dry, well ventilated conditions at an ambient temperature and away from all sources of damp. When kept in its original sealed state in a permanently dry environment, this product will retain a shelf life of up to 12 months from date of manufacture. Should further technical information be required, contact the Palace Technical helpline on 0151 486 6101.

SPECIFICATION

PALACE FAST-FLEX floor leveller is recommended for application over a comprehensive range of floor surfaces such as tamped or worn concrete and sand/cement floor screeds as well as non-porous floors such as mastic asphalt, plywood and mildly abraded power-floated concrete. It is particularly suited for installation in conjunction with heated sub-floors and can readily accommodate most types of wire-based sub-tile heating systems.

SPECIFIC SUBSTRATE PREPARATION

Although **PALACE FAST-FLEX** will bond readily to most solid sub-floors, the application of a primer on highly porous surfaces such as **PALACE MULTI-PRIME** diluted 1:3 will significantly reduce the risk of pin holes in the level finish whilst also maximising flow time & adhesion strength, also where Anhydrite Screed (Calcium Sulphate) based floors are being over-laid, the application of two coats of **PPALACE MULTI-PRIME** will be necessary to form a barrier & avoid any adverse interaction between the cement-based **PALACE FAST-FLEX** and the gypsum-based screed beneath it. (Consult **PALACE MULTI-PRIME** tech data sheet).

See page 3 for a range of substrate specifications...

*ANHYDRITE [CALCIUM SULPHATE] BASED SCREEDS

Mechanically remove any loose material / laitance to give a clean, dry, solid dust-free surface prior to the application of **PALACE MULTI-PRIME** (first coat diluted 1:1 then 2nd coat neat) to ensure a protective barrier is established. Drying times of this class of screed can be at a rate of 1mm screed depth per day (2mm per day is > 40mm deep). Anhydrite screeds which already incorporate pre-installed underfloor heating systems can be use this heat source to reduce drying times, along with de-humidifiers operating in the room, which will also speed up the drying process. The relative humidity (%RH) test result in the subfloor should be less than 75% RH, (residual moisture content < 0.5%) however where this cannot be achieved within a manageable period of time the application of a Damp Proof Membrane (**1-COAT DPM**) is recommended to be applied after the **MULTI-PRIME** barrier preparation step (above) has already been completed.

FLOORING GRADE ASPHALT

New asphalt must be left for a minimum of 7 days and degreased to remove surface bloom. If cracks are visible repair will be necessary to give a strong subfloor. Check the floor is in good condition and that there are no signs of de-bonding and/or hollowness. Recently asphalted floors that are smooth & impermeable will benefit from a slurry coat of **PALACE MULTI-PRIME** mixed 1:1 with neat cement and blinded with sand to improve the bond & key.

SAND/CEMENT SCREEDS

Recently installed sand/cement screeds must be allowed a minimum of 4 weeks to dry sufficiently. Ensure new sand/cement screed is confirmed dry via consistent moisture measurements across the whole surface. Sand/cement screeds must have a moisture reading of less than 75% relative humidity (RH) before any levelling compound can be applied over it. Remove any laitance from the surface mechanically and ensure that any other contaminants are cleared from the surface. ideally by a vacuum cleaner. On porous or worn screeds, prime the surface with **PALACE MULTI-PRIME** diluted 1:3 with water and then allow to dry.

NEW CONCRETE

Floor slabs must be allowed at least 6 weeks drying time equivalent to 1 day per mm up to an overall depth of 50mm and 2 days per mm for anything above 50mm. Ensure new concrete is tested via consistent moisture readings across the whole surface whereby a reading of less than 75% relative humidity (RH) is advised before work can commence. Remove any laitance from the surface mechanically and ensure that oil, grease curing agents and any other friable materials are removed ideally by vacuum. If the surface is relatively porous prime the surface with **PALACE MULTI-PRIME** diluted as 1:3 parts water and allow to dry.

DENSE OR POWER FLOATED CONCRETE

Ensure the surface has been allowed 7 days to cure. Ensure new concrete is confirmed dry via consistent moisture readings across the whole surface. Concrete screeds must have a reading of less than 75% relative humidity (RH) is advised before proceeding to over-lay. Remove any laitance or friable top finish from the surface mechanically whilst scoring & etching the surface before taking up all remaining dust residues by vacuum.

PLYWOOD OVERLAY (INTERNAL ONLY)

Check that plywood overlay is flooring grade compliant to EN 314:2 Class 3 Exterior before applying **PALACE FAST-FLEX** and ensure that new or existing boards are pre-conditioned to the environment in which they will be used. Plywood sheets must be a thickness of 15mm minimum & screwed to a secure, stable substrate at 150mm centres. Ensure there is sufficient ventilation beneath substrate and that the plywood has been fitted competently and will take the weight of the leveller, adhesive and the final anticipated in-use loading without any risk or sign of deflection. It should be dry and free of any contaminants, loose dust or dirt. Existing plywood showing signs of wear or abrasion will require priming with **PALACE MULTI-PRIME** diluted 1:3 with water. New, uncontaminated plywood does not require priming prior to over-laying with **PALACE FAST-FLEX**.

COATED WITH A SURFACE DAMP PROOF MEMBRANE

Damp-Proof Membrane coatings such as **PALACE 1-COAT DPM** should be treated as non-absorbent substrates and applications of **PALACE FAST-FLEX** should be completed within 12 hours of the DPM being first applied (Consult **PALACE 1-COAT DPM** technical data sheet). Sand blinding the freshly applied DPM will assist with improving the bond to over-laid screeds.

UNDERFLOOR HEATING SYSTEMS

Heating wires must be securely fixed to a sound consistent substrate such as cement backer board. **PALACE FAST-FLEX** should then be applied at a thickness which allows for a clearance above the elements of no less than 5mm depth of levelling compound to ensure a smooth even finish will be attained prior to laying the finished decorative or resilient surface. Always allow at least three weeks before the heating system is switched on at the lowest setting and then brought up to operating temperature at a rate of 5°C over the following week.

Note: When applying this product over any other floor type not specified above, please consult the Palace Technical department on 0151 336 9104 for advice specific to the floor surface, board type or UFH system the product is intended to be applied over. It is not advised to apply floor leveller over any "non-standard" flooring substrate or UFH system without checking its compatibility in advance.

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HEALTH & SAFETY

DANGER Contains Portland Cement
Causes Serious Eye Damage. Causes Skin Irriration.
May Cause Respiratory Irritation. May Cause An Allergic Reaction
Keep out of reach of children. Avoid breathing dust. Wear protective gloves/protective clothing/eye protection or face protection (mask). Use only outdoors or in a well ventilated area. IF IN EYES: rinse cautiously with water for several minutes, remove contact lenses, continue rinsing and immediately call for medical assistance. IF ON SKIN: Wash with plenty of water and soap. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs seek medical attention. If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, call for medical assistance.

Always ensure that appropriate PPE & overalls are worn when applying this product. Wash hands after use and launder stained clothing.
A complete PALACE material safety data sheet is available on request or online at www.palacechemicals.co.uk

TECHNICAL ADVICE

For advice on tile installation products call the Palace Chemicals Technical Helpline on 0151 336 9104.

TECHNICAL DATA

COMPRESSIVE STRENGTHS **(N/mm² - To BS EN 13892-2)**	1 day > 7.0 7 days > 21.0 28 days > 30.0
FLEXURAL STRENGTHS **(N/mm² - To BS EN 13892-2)**	1 day > 2.0 7 days > 5.0 28 days > 7.0
COVERAGE **20kg of FAST-FLEX powder, mixed with 4 litres of water**	5.0m² at 3mm depth 2.5m² at 6mm depth 1.0m² at 10mm depth

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. Our products are guaranteed against defective materials and manufacture and will be replaced or money refunded if the goods do not comply with our promotional literature. We cannot however accept responsibility arising from the application or use of our products because we have no direct or control over where and how our products are stored and used. All products are sold and guaranteed subject to our terms and conditions of sale, copies of which may be obtained on request.

APPROVED RECEIVING SURFACES

Sand / cement screed
Tile backer boards
Existing ceramic & stone tiles
Existing vinyl tiles
Concrete slabs
Plywood overlay
Under-floor heating
Flooring grade asphalt
Epoxy DPM
Moisture stable adhesives

Anhydrite screeds
Must be correctly prepared

CLASSIFICATION

UKCA	CE	UKNI
1289 - 21		
Palace Chemicals Ltd, Speke Hall Industrial Estate, Speke, Liverpool L24 1YA		
DoP - 68-43		
EN 13813 : 2002 - CT C30:F7 Cementitious screed material not intended as a wearing surface, for use internally in buildings		
Release of corrosive substances - CT	See MSDS	
Compressive strength	C30	
Flexural strength	F7	
Abrasion resistance	NPD	
Reaction to fire	Class E	

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