



# TECHNICAL DATA SHEET



Ver 04 - PALFL 28.10.24

## FLOW-LEVEL 2 PART FLOOR LEVELLER

- FAST DRYING - READY TO WALK ON AFTER 90 MINUTES
- HIGH FLOW EASY LEVELLING TO A SUPER SMOOTH FINISH
- READILY BONDS TO MOST COMMON SUB-FLOORS WITHOUT PRIMING
- CAN BE LAID OVER PRE-EXISTING STABLE ADHESIVE RESIDUES
- CAN BE LAID FROM 2MM UP TO 12MM BED DEPTH

### TECHNICAL SUMMARY

UNIT SIZES	20kg with 5 litres of latex additive
COLOURS	Dries Clear
FOOT TRAFFIC @ 20°C	90 minutes
READY FOR FLOOR COVERINGS	4 hours for a 3mm layer
WORKING TIME @ 20°C	20 minutes
INITIAL SET TIME @ 20°C	60 minutes
APPLICATION TEMPERATURES	>5°C and <35°C

\* More information can be found within data sheet



### PALACE 2 PART FLOOR LEVELLER

Is a 2 component latex-based floor levelling compound supplied as 20kg of protein-free powder to be mixed with 5 litres of the PALACE FLOW-LEVEL LATEX additive to give a highly flowable floor smoothing underlayment, free-flowing for up to 30 minutes which then sets to allow light foot- traffic as soon as 90 minutes after application.

**FAST DRYING  
90 MINS**

**HIGH FLOW  
SUPER SMOOTH FINISH**



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# FLOW-LEVEL

## 2 Part Floor Leveller



### DESCRIPTION

When set **PALACE FLOW-LEVEL** will be ready to receive ceramic tile fixing after 3 hours and decorative floor coverings from 4 hours after application. It is also approved for use with electric sub-floor heating systems and will provide a level floor bed from 2 to 12mm deep.

**Note:** **PALACE FLOW-LEVEL** is not suitable for directly over-laying soft vinyl, rubber, linoleum, cork or moisture sensitive floor coatings & adhesive residues.

### SURFACE PREPARATION

The receiving floor surface must be hard, sound and free from grease, dust, floor polish and loose deleterious materials such as worn surface coatings, plaster. Any adhesive & coatings residues must first be tested to determine if they are "moisture sensitive" and then removed if necessary. Prior to laying **PALACE FLOW-LEVEL** as a surface to receive moisture sensitive floor coverings, 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% actual residual moisture content - carbide test) - tested as per BS 8203:2017 - Annex B. Where it is not known whether an effective structural DPM is in place, or where the above 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, either before it is over-laid with **PALACE FLOW-LEVEL** levelling compound, or on relatively uneven concrete floors, where pre-smoothing can be carried out provided there is no risk of hydrostatic pressure. **PALACE FLOW-LEVEL** can be laid directly to the sub-floor and the flat level finish it provides then gives an easier surface to be over-coated with **PALACE 1-COAT DPM** to ensure protection for subsequently applied moisture sensitive floor coverings.

### SPECIFIC SUBSTRATE PREPARATION

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

### 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 TILERS MULTI-PRIME** (first coat diluted 1:1 then second 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 if > 40mm deep). Anhydrite screeds which already incorporate pre-installed underfloor heating systems can 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 **PALACE TILERS 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.

### 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 TILERS MULTI-PRIME** diluted as 1:3 parts 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.



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## 2 Part Floor Leveller



### NEW CONCRETE (CONTINUED)

If the surface is relatively porous prime the surface with **PALACE TILERS 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) 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

Check that plywood overlay is flooring grade compliant to EN 314:2 Class 3 Exterior before applying **PALACE FLOW-LEVEL** and ensure that new or existing boards are pre-conditioned to the environment in which they will be used. When the finished floor is LVT or a similar soft-flooring, a 6mm plywood sheet, screw-fixed base can be used, but for resilient ceramic or stone surfaces the plywood base must be a thickness of 15mm minimum & screwed to sub-floor structure 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 of excessive 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 TILERS MULTI-PRIME** diluted 3-parts water, to 1-part **PALACE TILERS MULTI-PRIME**. New, uncontaminated plywood does not require priming prior to over-laying with **PALACE FLOW-LEVEL**.

### FLOORS 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 FLOW-LEVEL** should be completed within 12 hours of the DPM being first applied (Consult **PALACE TILERS MULTI-PRIME** technical data sheet). Sand blinding the freshly applied DPM will assist with improving the bond to over-laid screeds. Where a **PALACE 1-COAT DPM** has been in place for longer than 24 hours, then the surface should be mildly abraded to ensure a good key is formed with the subsequently applied levelling compound.

### UNDERFLOOR HEATING SYSTEMS

Heating wires must be securely fixed to a sound consistent substrate such as cement backer board. **PALACE FLOW-LEVEL** 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 elements are switched on at the lowest setting and then only raise the temperature progressively by 2°C per day over the following week.

### MIXING

Add 5.0 litres of **PALACE FLOW-LEVEL LATEX** liquid additive into a clean mixing bucket and gradually add all the **PALACE FLOW-LEVEL** powder from the 20kg sack whilst stirring with a power whisk fitted to an electric drill until a smooth, creamy, lump free & fluid consistency is reached. The material should be mixed for a minimum of 2 minutes after the last of the powder is added ensuring the mixing head is below the surface to minimise air entrapment. Allow the mix to stand for 1 minute after which time the free-flowing screed will be ready for application directly onto the prepared substrate.

### APPLICATION METHOD

Pour the freshly mixed levelling compound onto the prepared surface and use a straight edged steel float to ensure the compound is evenly spread into all areas and corners. **PALACE FLOW-LEVEL** will readily flow across a flat surface and smooth out trowel marks for about 20 to 30 minutes before it begins to firm up. Do not allow the mixed material to stand for a prolonged period in the bucket as this will shorten its flow & open time. The use of a spiked roller will assist in removing air bubbles and achieving a consistent smooth surface finish, particularly between adjacent mixes of product.

Only spike roll whilst the product is still in its fluid state, usually for about 10 minutes after initial application. The maximum total application thickness for this product is up to a depth of 12mm. In ideal conditions (20°C), it will remain flowable for 20 minutes and then after about 45 minutes to 1 hour, the laid screed will have reached initial set, before final set is attained after 60 to 90 minutes depending on site conditions. Do not mix or apply this product if site & surface temperatures are below 5°C or greater than 35°C or likely to be less than 5°C for the first 24 hours after application. All tools & mixing equipment with clean running water before the material reaches set.



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### PRECAUTIONS

**PALACE FLOW-LEVEL** should not be mixed with water or any other brand of latex additive. Both units have a storage life of not less than 12 months if stored in dry, un-opened and frost-free conditions at temperatures between 5°C & 30°C. **PALACE FLOW-LEVEL** is not recommended as a final wearing surface. Note: this product is not suitable for directly over-laying soft flexible vinyl, rubber, cork or any similar moisture sensitive very soft floor coatings & unstable adhesive residues.

### COVERAGE

**PALACE FLOW-LEVEL** when applied over a smooth even non-absorbent floor will cover at a rate of one 20kg bag & 5 litre bottle when laid as a 3mm layer will cover up to 5.0M<sup>2</sup>. Adequate ventilation is essential and any draughts or exposure to excessive heat sources must be eliminated to ensure consistent drying.

### CURING & DRYING

**PALACE FLOW-LEVEL** when applied at 20°C & 65% RH under ideal site conditions will allow for a working time of up to 20 minutes and then initial set after 1 hours. Under the above conditions it will rapidly cure to allow light foot traffic after 90 minutes and will be ready to receive tiles after 3 hours and soft flooring after 4 hours.

### STORAGE AND PACKAGING

**PALACE FLOW-LEVEL** is supplied in 20kg moisture resistant bags along with a 5.0 litre bottle of latex dispersion additive. This product should not be mixed with water or any other brand of latex additive. Both units have a storage life of not less than 12 months if stored in dry, un-opened and frost-free conditions @ 5 - 30°C.

### HEALTH AND 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 AND 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.

### TECHNICAL ADVISORY SERVICE

Should more specific technical information be required, contact the Palace Technical helpline on: **0151 486 6101**.

For a Technical Specification and quantity requirements, visit our 'TilingSpecifier' on the Palace website at:

<http://www.palacechemicals.co.uk>

TECHNICAL DATA	
SPECIFICATION	BS EN 13813:2002
CLASSIFICATION	CT-C16-F4
WORKING TIME @ 20°C	20 min
FLOW PROPERTIES (USING A 30MM X 50MM FLOW RING)	>130mm
INITIAL SET	60 mins
FOOT TRAFFIC	90 mins
READY FOR FLOOR COVERINGS	4 Hours for a 3mm layer
COMPRESSIVE STRENGTHS (N/MM2 - TO BS EN 13892-2)	1 day >8.0 7 days >12.0 28 days >16.0
FLEXURAL STRENGTHS (N/MM2 - TO BS EN 13892-2)	1 day >2.0 7 days >4.0 28 days >5.0
COVERAGE 20KG OF FLOW LEVEL POWDER MIXED WITH 5 LITRES OF FLOW LEVEL LIQUID WILL COVER AS FOLLOWS	5.0M <sup>2</sup> at 3mm depth 2.5M <sup>2</sup> at 6mm depth 1.0M <sup>2</sup> at 10mm depth
APPLICATION TEMPS	>5°C and <35°C
PACK SIZES	20kg powder with 5 litres of liquid latex additive



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APPROVED RECEIVING SURFACES
✓ Concrete
✓ Sand / Cement screeds
✓ Tile backer boards
✓ Existing ceramic & stone tiles
✓ Existing Vinyl tiles
✓ Anhydrite screeds *
✓ Green Screed
✓ Concrete Slabs
✓ Plywood Overlay
✓ Under-floor heating
✓ Flooring grade asphalt
✓ Epoxy DPM
✓ Moisture stable adhesives

\* Must be securely fixed & primed/sealed

### 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.



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