



Issue – 01-2/0518

SELF-LEVEL



- **High Flow fast levelling to a super smooth finish.**
- **Takes foot traffic after 4 hours & tiling after 8 hours.**
- **Levels from 2mm up to 12mm in a single application.**
- **Can be mixed with water or Palace Self Level Latex.**
- **Use Floor Screed latex for heated sub-floors.**
- **Protein & ammonia free low odour formulation**

Description:

PALACE SELF-LEVEL is a protein free cement-based, sub-floor smoothing underlayment that has been formulated to provide a consistently level finish to solid sub-floors prior to laying ceramic or decorative floor coverings, giving a consistently level screed from a 2mm up to 12mm thick. **PALACE SELF-LEVEL** incorporates specially blended cements, finely grade sands and organic super-plasticisers, which with the addition of correctly gauged water gives the ideal properties for application to masonry-based floor surfaces such as tamped or worn concrete and sand/cement floor screeds. On non-porous floors such as mastic asphalt, plywood, dense concrete, existing tiles and painted or sealed surfaces, **PALACE SELF-LEVEL** powder should be mixed with **PALACE SELF-LEVEL LATEX** to give improved adhesion to the substrate and allows the product to be used on floors where under-tile heating is to be specified.

Surface Preparation:

The receiving floor surface must be hard, sound and free from grease, dust, floor polish, laitance 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 SELF-LEVEL**, 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 SELF-LEVEL** levelling compound.

Although **PALACE SELF-LEVEL** will bond readily 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 part to 3 parts water which can be used for this purpose. Highly porous substrates may need a pre-coat of primer with 3 parts water & mixed with 1-part primer (allowed to completely dry) and then a second coat diluted 1-part water to 1-part primer before applying the levelling underlayment. Note: on very absorbent substrates a third coat may be required diluted 1-part water to 1-part primer.

Where Anhydrite Screed (Calcium Sulphate) based floors are being over-laid, the application of two coats of **PALACE MULTI-PRIME** (see tech data sheet) will be necessary to form a barrier & avoid any adverse interaction between the cement-based **PALACE SELF-LEVEL** and the gypsum-based anhydrite screed beneath it.

Specific Substrate Preparation:

Although **PALACE SELF-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 MULTI-PRIME** diluted 1 to 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 MULTI-PRIME** will be necessary to form a barrier & avoid any adverse interaction between the cement-based **PALACE SELF LEVEL** and the gypsum-based screed beneath it. (Consult **PALACE 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 MULTI-PRIME** (first coat diluted 1 to 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 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 (**PALACE 1-COAT DPM**) is recommended to be applied after the **PALACE MULTI-PRIME** barrier preparation step (above) has already been completed.

Flooring Grade Asphalt:

New asphalt must be left for a at least 7 days and degreased to remove surface bloom. If cracks are visible, then repair to give a strong subfloor. Check the floor is in good condition and that there are no signs of de-bonding and/or hollowness. Then over-lay with **PALACE SELF-LEVEL** powder mixed with **PALACE SELF-LEVEL LATEX**

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 as 1-part primer to 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. If the surface is relatively porous, then prime with **PALACE MULTI-PRIME** diluted as 1 part to 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 with **PALACE SELF-LEVEL** mixed with **PALACE SELF-LEVEL LATEX**. 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 SELF-LEVEL** (mixed with **PALACE SELF LEVEL-LATEX**) 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 and be screw fixed to a secure 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 3-parts water, to 1-part **PALACE MULTI-PRIME**. New, uncontaminated plywood does not require priming prior to over-laying with **PALACE SELF-LEVEL** mixed with **PALACE SELF-LEVEL LATEX**.



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EN ISO 14001



EMS 85788

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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 SELF-LEVEL mixed with SELF-LEVEL LATEX 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 SELF-LEVEL mixed with SELF-LEVEL LATEX 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:

PALACE SELF LEVEL floor leveller should be added to clean water in a clean container and mixed thoroughly with a power whisk fitted to an electric drill to give a smooth, lump-free, flowable & pourable levelling compound which should be applied to the intended area without delay. The recommended mixing proportions are 4.5 litres of water per 20kg sack (or 5.0 litres of PALACE SELF-LEVEL LATEX). Exceeding this recommendation will result in excess bleed and a weaker mix. 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:

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 SELF-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 20mm. In ideal conditions (20°C), it will remain flowable for 20 minutes and then, after about 3 hours, the laid screed will have reached final set sufficient to take light foot traffic. All tools & mixing equipment should be washed immediately after use with clean running water before the material reaches its' initial setting time.

Curing & Drying:

PALACE SELF-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 reach initial set after 1 hour. Under the above conditions it will rapidly cure to allow light foot traffic after 3 hours and will be ready to receive tiles after 4 hours and soft flooring after 24 hours.

Coverage:

PALACE SELF-LEVEL when applied over a smooth even non-absorbent floor at an average 3mm depth will cover at a rate of one 20kg bag per 5.0M². Adequate ventilation is essential during the drying process and any draughts or exposure to excessive heat sources must be eliminated to ensure consistent drying.

Precautions:

PALACE SELF-LEVEL can be applied when mixed only with water to porous & semi-porous concrete or screed bases. Areas where sub-floor heating is to be installed or over impermeable substrates & plywood require the powder to be mixed with PALACE SELF-LEVEL LATEX. Do not apply this product when air or ground temperatures are at or below 5°C or above 35°C or if they are likely to remain below 5°C for the first 24 hours. PALACE SELF-LEVEL is not for use as a final wearing surface.

Storage & Packaging:

PALACE SELF-LEVEL is supplied in 20kg moisture resistant bags and should have a storage life of not less than 12 months if stored in dry, un-opened and frost-free conditions. PALACE SELF-LEVEL LATEX is available in 5 litre bottles.

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

Technical Data:

Specification:	BS EN 13813:2002
Classification:	CT-C20-F6
Working time @ 20°C	20 - 30min
Flow properties: (using a 30mm x 50mm flow ring)	>130mm
Initial set	60 mins
Foot Traffic	180 mins
Ready for Tiling:	4 Hours for a 5mm layer
Compressive Strengths: (N/mm² – to BS EN 13892-2)	1 day >5.0 7 days >15.0 28 days >16.0
Flexural Strengths: (N/mm² – to BS EN 13892-2)	1 day >2.0 7 days >4.0 28 days >6.0
Coverage:	20kg of SELF LEVEL powder mixed with 4.5 litres of water will cover as follows:
	5.0M ² at 3mm depth 2.5M ² at 6mm depth 1.0M ² at 10mm depth
Application Temps:	>5°C and <35°C
Pack size:	20kg
Compatible substrates:	
✓ Sand / Cement screeds	✓ Concrete Slabs
✓ Tile backer boards	✓ Plywood Overlay
✓ Existing ceramic & stone tiles	✓ Under-floor heating
✓ Anhydrite screeds*	✓ Flooring grade asphalt
	✓ Epoxy DPM

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.

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.



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