



Issue – 01-2/0518

# WEAR-TOP



- **Has a working flow time of 30 to 40 minutes at 20°C.**
- **Takes foot traffic after 3 hours & vehicle loading after 36 hours**
- **Can be laid from 5mm up to 20mm bed depth in a single pour**
- **Dual purpose internal / external underlayment & wear resistant topping.**
- **Suitable for pump or trowel application**
- **Can receive a decorative resin-based coating after 48 hours**

## Description:

**PALACE WEAR-TOP** is a dual-purpose polymer-modified, cement-based internal/external high durability floor screed which can be applied as a sub-floor, self-smoothing underlayment or as a wear-resistant surface topping. It has a high degree of abrasion resistance making it suitable for internal & external areas where regular heavy trafficking is expected, whilst its' high early strength development makes it a suitable base for receiving decorative wear resistant resin coatings.

**PALACE WEAR-TOP** is a protein free formulation so may be used in biologically sensitive areas and can be placed from 5mm up to 20mm in one single application, which is then able to receive foot traffic after 3 hours & vehicle loading after 36 hours.

**PALACE WEAR-TOP** is mixed only with water and is suitable for applying over a comprehensive range of typically encountered structurally resilient floor surfaces including power-floated or tamped concrete, along with existing cementitious & anhydrite\* based screeds.

## 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 or coatings residues must first be tested to determine if they are "moisture sensitive" and then removed if necessary. Prior to laying **PALACE WEAR-TOP** 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. Where the floor is relatively uneven and provided there is no risk of hydrostatic pressure, **PALACE WEAR-TOP** floor leveller is moisture tolerant & can be laid directly to the sub-floor giving an easier surface to be over-coated with **PALACE 1-COAT DPM** to ensure protection for any subsequently over-laid "moisture sensitive" floor coverings. **PALACE WEAR-TOP** 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 WEAR-TOP** 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 WEAR-TOP** 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 **MULTI-PRIME** (first coat diluted 1 to 1 then 2<sup>nd</sup> 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 used 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.

### 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 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. 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 WEAR-TOP** and ensure that new or existing boards are pre-conditioned to the environment in which they will be used. For heavily trafficked floors Plywood sheets must be a thickness of 15mm minimum & screwed to 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 **MULTI-PRIME**. New, uncontaminated plywood does not require priming prior to over-laying with **PALACE WEAR-TOP**



## PALACE CHEMICALS Ltd

Speke Hall Industrial Estate,  
Speke, Liverpool; L24 41YA  
Tel: 0151 486 6101 – Fax: 0151 448 1982  
e-mail: sales@palacechemicals.co.uk

EN ISO 14001



EMS 85788

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FM 01010

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OHS 596309





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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 WEAR-TOP** 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 WEAR-TOP** 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 WEAR-TOP** 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 **4.0 litres of water per 20kg sack** and 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 WEAR-TOP** 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 soon after laying will assist in removing air holes and achieving a consistent smooth surface finish, particularly between adjacent mixes of product. Only spike roll whilst the product is still in its most fluid state, usually for no more than 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 WEAR-TOP** 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 WEAR-TOP** when applied over a smooth even non-absorbent floor at an average 5mm depth will cover at a rate of one 20kg bag per 2.3M<sup>2</sup>. **PALACE WEAR-TOP** is recommended as a final wearing surface but may benefit from a resin coat finish to give a consistent floor shade. 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:

It is not always possible to control the surface colour consistency due to variables in raw materials and application methods, hence there is a recommendation to "over coat" with a resin-based pigmented sealer where an even colour is desired. Applications of a resin top coat should determine that **PALACE WEAR-TOP** has cured to achieve a minimum 25 N/mm<sup>2</sup> and is sufficiently dry before proceeding, as adverse site conditions may prolong the 48 hours recommended. 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.

## Storage & Packaging:

**PALACE WEAR-TOP** 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.

## 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)

## Technical Data:

<b>Specification:</b>	BS EN 13813:2002
<b>Classification:</b>	CT-C35-F10
<b>Working time @ 20°C</b>	20 - 30min
<b>Flow properties:</b> (using a 30mm x 50mm flow ring)	>130mm
<b>Initial set</b>	60 mins
<b>Foot Traffic</b>	180 mins
<b>Ready for Tiling:</b>	4 Hours for a 5mm layer
<b>Compressive Strengths:</b> (N/mm <sup>2</sup> – to BS EN 13892-2)	1 day >11.0 7 days >27.0 28 days >35.0
<b>Flexural Strengths:</b> (N/mm <sup>2</sup> – to BS EN 13892-2)	1 day >2.0 7 days >5.0 28 days >7.0
<b>Coverage:</b> 20kg of Wear Top powder mixed with 4 litres of water will cover as follows	2.3M <sup>2</sup> at 5mm depth 1.7M <sup>2</sup> at 7mm depth 1.1M <sup>2</sup> at 10mm depth
<b>Application Temps:</b>	>5°C and <35°C
<b>Pack size:</b>	20kg
<b>Compatible substrates:</b>	
✓ Sand / Cement screeds	✓ Concrete Slabs
✓ Tile backer boards	✓ Plywood Overlay
✓ Existing ceramic & stone tiles	✓ Under-floor heating
✓ Existing Vinyl tiles	✓ Flooring grade asphalt
✓ Anhydrite screeds *	✓ Epoxy DPM
	✓ Moisture stable adhesives

## 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.



## PALACE CHEMICALS Ltd

Speke Hall Industrial Estate,  
Speke, Liverpool, L24 41YA  
Tel: 0151 486 6101 – Fax: 0151 448 1982  
e-mail: [sales@palacechemicals.co.uk](mailto:sales@palacechemicals.co.uk)

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