



Sovereign Porcel-Flex Rapid Set

Sovereign's specially formulated tile adhesive for the rapid fixing of ceramic floor and wall tiles.



Product Code

Grey: **30609271**

White: **30609272**

Description

Sovereign Porcel-Flex is a non-slip, fast setting, flexible wall and floor tile adhesive, which only requires the addition of water for use. Porcel-Flex is formulated for fixing large format porcelain, ceramic and natural stone tiles, mosaic, quarry and terrazzo to most standard interior and exterior installations. It is also suitable in more demanding installations such as swimming pools, plywood overlay, underfloor heating and areas subject to limited vibration. It will bond to correctly prepared calcium sulphate screeds, concrete, gypsum plaster and plasterboard, sand/cement render and screeds, glazed surfaces, and vinyl tiles.

Form Supplied: Dry Powder

Pack Sizes: 20 kg

Colour Range: Grey or White

Properties

Formulated for fast track installation and enables tiles to be grouted 2-3 hours after fixing. Its high water resistance makes it suitable for swimming pools and wetrooms. Formulated for large format floor tiles, natural stone, porcelain, terrazzo and stone. Suitable for use with WBP plywood overlay. NOTE: Pale coloured marble/porcelain can be translucent and dark coloured adhesive can sometimes show through. If in doubt, we would recommend tiling a small trial area or use the white grade of Porcel-Flex. Conforms to the requirements of BS EN 12004 Type C2 FT-S1

Preparation

Tiling and grouting must be carried out in accordance with the relevant British Standards Codes of Practice – BS 5385

Before starting any work, ensure that the bases are : - Sufficiently flat to permit the specified flatness of finished tiling, bearing in mind the permissible minimum and maximum thickness of the bedding material.

Suitable for tiling in the service conditions to which it will be exposed.

Sufficiently strong and rigid to support the tile finish. Free from efflorescence, laitance, dirt and other loose material.

Free from deposits of oil, grease and other de-bonding materials.

Clean and dry.

Mixing

Add the powder to clean water in a clean container and mixed thoroughly to give a creamy lump-free mortar.

The mix proportions are approx. 4.4 litres of water to 20 kg bag of cement.

The mortar will have a pot life of approx. 20 - 30 mins at 20°C. Do not mix more than can be used within this time. Setting time and strength development will vary with temperature, being retarded at lower, and accelerated at higher temperatures.

The performance of Porcel-Flex will be significantly enhanced when mixed using a mechanical stirrer, otherwise mix for at least 5 minutes using as little water as possible to achieve a workable consistency.

Do not add extra water after initial mixing.



APPLICATION

Do not apply adhesive at temperatures below 5°C.

Thin Bed:

For thin bed application, in situations where dry conditions will prevail, Porcel-Flex should be applied by the notched trowel method.

The adhesive should be applied to the surface as a thin floated coat at a uniform thickness of approx. 3 mm and then ribbed with a suitable notched trowel.

The tiles should be pressed firmly onto the ribbed adhesive with a slight twisting action within the open time of the adhesive.

Thick Bed/Solid Bed:

For thick bed application in the case of surfaces that are subjected to movement or not sufficiently true and flat to permit thin bed fixing, Porcel-Flex may be applied as a floated 3 mm - 6 mm thickness not exceeding 12 mm. Deep lugs, keys or uneven tiles should be buttered with the adhesive before they are fixed.

GROUTING

Leave for 2-3 hours before grouting or longer when site temperatures are well below 20°C.

MOVEMENT JOINTS

Any movement joints visible in the screed should be followed through the tiling to the surface. Failure to do this may result in excessive movements within the structure being transferred to the tiles with the likelihood of resultant failure of the system. Movement joints should be provided in accordance with BS 5385 Part 1: 20 or BS 5385 Part 2: 20 and their location should be decided at the design stage.

SURFACE CONSIDERATIONS

FLOORS

New Concrete:

Before covering and after curing, concrete should be left to dry out by exposure to air for at least 6 weeks. Any falls required in the system should be formed in the new concrete and not the tiling layer.

New Sand/Cement Screeds:

Before covering and after curing, screeds should be left to dry out by exposure to air for at least 3 weeks. It is recommended that screeds should have a relative humidity level of 75% or below as tested by an air hygrometer.

Existing Concrete/Screed Bases:

Existing cementitious substrates should be sound and dry. Any unsound areas should be removed, replaced and treated as a new screed or concrete.

Extruded Polystyrene Tile Backerboards & Waterproof Insulation Boards:

This type of tile backerboard is particularly suitable where any exposure to moisture is expected e.g. wetrooms, splashbacks and around showers, baths etc. on walls and floors. All recommendations given by the board manufacturer should be followed. In general, when fixing to timber frames or batons, a 12.5 mm board should be specified as a minimum thickness and ring nails or screws must be used to positively fix the boards over the complete area. Floors require a minimum thickness of 10 mm. Ensure that the boards are rigid and the fixings do not protrude. Where tiling exceeds a height of 2.4 m, reference should be made to the board supplier/manufacturer. The weight of the tiling should not exceed 60 kg/m². Do not seal or prime the surface.

Cement Tile Backerboards/Waterproof Insulation Boards:

Cement boards are suitable particularly where any exposure to moisture is expected e.g. wetrooms, splashbacks, and around showers, baths etc. on walls and floors. All recommendations given by the board manufacturer should be followed. In general, when fixing to timber frames or batons, 12 mm board should be specified as a minimum thickness and ring nails or screws must be used to positively fix the boards over the complete area. Floors require a minimum of 6 mm. Ensure that the boards are fixed with a 3 mm gap from walls, vanities etc. They must be rigid and the fixings do not protrude. Where tiling exceeds a height of 2.4 m, reference should be made to the board supplier/manufacturer. The weight of the tiling should not exceed 50 kg/m². Do not seal or prime the surface.

SURFACE CONSIDERATIONS

FLOORS CONTINUED

Calcium Sulphate/Gypsum Based Screeds

If the cement based adhesive is applied directly to this type of screed the cement can react with the gypsum resulting in the formation of a crystal structure called Ettringite.

This will result in expansion which will break the bond at this interface resulting in a separation of the two. Therefore, it is necessary to apply an isolating barrier between the adhesive and the screed. Where necessary the screeding contractor will usually remove any surface laitance (a shiny, hard crust) prior to any further works being carried out. If laitance is still present, this must be resolved first before continuing. The screed should then be vacuumed to remove all dust and friable material so that the surface is clean, dry and sound. This type of screed usually takes approximately 1 mm/day up to 40 mm thickness, adding 2 days/mm above 40 mm thickness (based on a sealed site with controlled environment). The tiling work should only be undertaken on a screed with a moisture content below 0.5% (or an RH of 75% or below when tested with a surface hygrometer). The screed should be sealed with a primer that will provide a barrier to prevent any contact with the cementitious adhesive and the gypsum screed. We recommend Sovereign Prime-Flex diluted with water. Several coats should be applied to ensure the floor is fully sealed and each coat allowed to dry thoroughly. Subsequent work should be undertaken within 48 hours and the surface should be protected from dust and other contaminants.

Plywood Overlay

Plywood should be of WPB external or marine grade. The minimum recommendation thickness is 15 mm – 18 mm. Check suitability of sheets for the intended application with the manufacturer. Plywood sheets must be dry, securely fixed and rigid. They should be screwed to the supporting joists at maximum 300 mm centres. It is imperative that the joints between boards are supported by either a joist or a noggin. Extra noggins may need to be inserted for this reason. The faces and edges should be sealed with Sovereign Prime-Flex pre-diluted 1 : 2 with water to prevent the ingress of ambient moisture. This type of substrate is sensitive to water; care should be made to prevent water ingress. In this situation, we would recommend waterproofing out the installation with a Sovereign Watertite. The method of fixing must be solid bed using the appropriate notched trowel. No voids should exist between the tile and substrate, minimum bed thickness 3 mm.

FLOORS CONTINUED

Existing Floor Tiles

All loose tiles should be removed and hollows filled before tiling. Existing tiles should be thoroughly cleaned and degreased before tiling to remove all contaminants. Mechanically abrade the tile surface, particularly with quarry tiles, to ensure a good bond can be formed.

Vinyl Tile

Rigid vinyl tiles should only be tiled if they are rigid and firmly fixed to their base. Any loose areas should be removed and the whole area thoroughly degreased before fixing. The surface must be sufficiently regular to receive an even bed thickness of adhesive. Prime with Sovereign Prime-Flex pre-diluted 1 : 2 with water. Cushioned, soft types of flooring are not suitable and must be completely removed prior to tiling.

Mastic Asphalt

Asphalt must be rigid and solidly fixed. Only internal, flooring grade asphalt should be tiled. Never tile onto external roofing grade asphalt as this will be too soft to acceptably receive tiles. Prime with Sovereign Prime-Flex pre-diluted 1 : 2 with water.

UNDERFLOOR HEATING SYSTEMS

Heated Screeds

With any new screed, time must be allowed for curing and drying. Screeds should be kept covered with waterproof sheeting for at least 7 days after laying to prevent drying out. During this period, strength is gained and drying shrinkage delayed, enabling the screed to better resist shrinkage stresses. After this period, screeds should be subjected to continuous air-drying for at least a further 2 weeks before tiling is started. Where screeds are greater than 50 mm thick they should be laid in layers of no more than 50 mm thickness. This is in order to facilitate good compaction. Information regarding drying times of screeds greater than 50 mm and any other aspects can be obtained in BS 8204. Ensure that the heating is turned off for at least 48 hours before any tiling work is carried out and not turned back on for 28 days after tiling has been completed. Bring the temperature of the system up slowly 5°C per per 24 hours to a temperature of 25°C and maintained at that level for 3 days before being allowed to cool to room temperature. This is to prevent delamination and cracking caused by thermal shock. The method of fixing must be solid bed using the appropriate notched trowel. No voids should exist between the tile and substrate, minimum bed thickness 3 mm.

SURFACE CONSIDERATIONS

UNDERFLOOR HEATING SYSTEMS CONTINUED

Matting and Cable Systems

Underfloor heating systems which consist of heating elements held together with a matting matrix are proving to be an efficient, low cost alternative to the traditional method of heated pipes laid into a screed. They have the benefit of being easily installed in a number of different situations and being only a few millimetres thick, are ideal for installations incorporating floor tiles. It is important that the substrate to be tiled is rigid. Concrete and screeds are, therefore, usually ideal and will provide a good solid background. It is stated in the British Standards BS 5385 Part 3, Section 14.2.3 that new structural concrete should be exposed to air drying after the end of curing for at least 6 weeks before a screed or directly bedded materials are applied. Timber floors should have noggins between the joists at 300 mm centres and overlaid with either a tile backerboard (minimum 10 mm thickness) or plywood (minimum 15 mm thickness) screwed to both joists and noggins at maximum 300 mm intervals. A flexible screed such as Sovereign Flexible Floor Levelling Compound can be used to cover the matting or cable before the adhesive is applied. The method of fixing must be solid bed using the appropriate notched trowel. No voids should exist between the tile and substrate, minimum bed thickness 3 mm. The system should be set to ensure the temperature on a timber-based floor does not exceed 27°C and 40°C on a concrete base.

Chipboard, MDF, OSB, GRP Fibre Glass, Magnesite, Cork, External Asphalt, Wall Paper, Varnish, Plastics, Metals, PVC Melamine, Formica Shuttering Plywood and Hardboard: **Not suitable for direct fixing.**

WALLS

New Concrete/Masonry

Before covering and after curing, concrete and masonry should be left to dry out by exposure to air for at least 6 weeks.

New Sand/Cement Render

Before tiling, allow to dry out by exposure to air for at least 2 weeks.

New and Existing Gypsum Plaster

Before tiling, the plaster must be left for at least 4 weeks and be thoroughly dry. Never tile onto a soft backing plaster. Remove any defective areas, including badly cracked plaster, to straight horizontal and vertical edges. Smooth plaster should be mechanically roughened to supply a suitable key. All plaster must be primed with Sovereign Prime-Flex pre-diluted 1 : 2 with water. This type of substrate is sensitive to water; care should be made to prevent water ingress. In this situation, we would recommend waterproofing the installation with Sovereign Watertite.

Plasterboard

Ensure that boards are dry, securely fixed and rigid and the face intended to receive the decorative finish is exposed. Plasterboard should be screwed into the supporting joists at maximum 300 mm centres. This type of substrate is sensitive to water; care should be made to prevent water ingress. In this situation, we would recommend waterproofing the installation with Sovereign Watertite.

Plywood

Sheets must be dry, securely fixed and rigid. They should be screwed to the supporting joists at maximum 300 mm centres vertically and horizontally. Only moisture resistant or exterior grade boards should be used. Check suitability of sheets for the intended application with the manufacturer. The faces and edges should be sealed with Sovereign Prime-Flex pre-diluted 1 : 2 with water to prevent the ingress of ambient moisture. This type of substrate is sensitive to water; care should be made to prevent water ingress. In this situation, we would recommend waterproofing the installation with Sovereign Watertite.

Painted Walls

Ensure that paint is in a sound condition. Emulsion paints are generally insufficiently strong to hold tiles and adhesive and should be removed mechanically prior to tiling. Firmly fixed gloss paints may be suitable but removal is always recommended. Paint strippers should not be used as they can leave a debonding layer that reduces the bond strength of the adhesive.

Sovereign Porcel-Flex Rapid Set

Technical
Data Sheet **114**

Storage: Between 5°C – 30°C, under cover, in unopened bags clear of the ground in dry conditions, protected from frost and excessive draught.

Shelf Life: 6 months from the date shown on this packaging, the activity of the reducing agent added will be maintained and this product will contain, when mixed, no more than 0.0002% (2ppm) soluble chromium (VI) of the total dry weight of the cement.

HEALTH & SAFETY

! **Contact between cement powder and body fluids (e.g. sweat and eye fluids) may cause irritation, dermatitis or burns.** There is a risk of serious damage to eyes. Wear suitable protective clothing, gloves and eye/face protection. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. After contact with skin wash immediately with plenty of clean water. Keep out of reach of children.



Health & safety information available on request



Important Disclaimer

The information given is in good faith based on experience and usage, however all recommendations are made without warranty or guarantee, since the conditions of use are beyond our control. All goods are sold in accordance with our Conditions of Sale, copies of which are available on request. Customers are advised that product, techniques and codes of practice are under constant review and changes occur without notice. Please ensure you have the latest updated information.

CLEAN UP

Surplus adhesive should be removed immediately from the surface of tiles and grout lines. Clean tools and equipment immediately after use with water. Handle and dispose of empty packaging and waste according to local authority regulations.

COVERAGE

Fixes approximately 5 – 9 m² per bag, depending on trowel used.



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CONSTRUCTION PRODUCT REGULATION

DECLARATION OF PERFORMANCE NO. 095-CPR-13-03-17

Product Description: Sovereign Porcel-Flex – Grey and White
 Product Codes: 30609271, 30609272
 Intended Use: Improved deformable standard setting cementitious adhesive with extended open time and reduced slip for internal & external tiling
 Manufacturer: Sovereign Chemicals Ltd
 Contact Address: Park Road
 Barrow-in-Furness
 LA14 4EQ
 System of Assessment: System 3
 Harmonised Standard: EN12004:2007+A1:2012
 Notified Body: The notified body No.NB1289 carried out the determination of the product type on the basis of type testing on samples taken by the manufacturer under system 3 and issued the test (151125)-6820.
 Declared Performance: C2FT-S1

Essential Characteristics	Performance	Harmonised technical specification
Reaction to fire	F	EN12004:2007+A1:2012
Initial tensile adhesion strength	≥ 1.0 N/mm ²	
Tensile adhesion strength after water immersion	≥ 1.0 N/mm ²	
Tensile adhesion strength after heat aging	≥ 1.0 N/mm ²	
Tensile adhesion strength after freeze thaw cycles	≥ 1.0 N/mm ²	
Open time: tensile adhesion strength	≥ 0.5 N/mm ² after not less than 20 min	
Early tensile adhesion strength	≥ 0.5 N/mm ²	
Open time: tensile adhesion strength	≥ 0.5 N/mm ² after not less than 10 min	
Slip	≤ 0.5 mm	
Deformable adhesive: Transverse deformation	≥ 2.5 and <5.0 mm	
Release of dangerous substances	See MSDS	

The performance of the above product is in conformity with the declared performance as defined under EN 12004:2007+A1:2012.

This declaration of performance is issued under the sole responsibility of Sovereign Chemicals Ltd.

Signed for and on behalf of Sovereign Chemicals Ltd by:

Name: Steve Kennedy Function: R&D Manager

Signature:  Date: March 2017.



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