



Porocol FF

One-component fine-grained, white cement mortar for laying cellular-concrete blocks and for smoothing over the surface in layers of up to 10 mm thick. Fire resistance class according to EN 1364-1 EI 240 - E 120



WHERE TO USE

- Internal and external block and panel walls in cellular-concrete or silicated lime, thermal blocks, etc.
- Internal and external render and smoothing and levelling layers.

TECHNICAL CHARACTERISTICS

Porocol FF is a white-coloured powder made up of cement, fine-grained selected aggregates, synthetic resins and special additives according to a formula developed in MAPEI's own research laboratories.

When mixed with water, **Porocol FF** forms a fine, white highly-thixotropic mortar with good bond strength and good workability which is easy to apply on both horizontal and vertical surfaces.

Porocol FF hardens without shrinking and bonds perfectly to all materials normally used in the building industry. It is also resistant to water and freezing weather.

This product is classified as GP according to EN 998-1 Standards: "General purpose mortar for internal/external render", guaranteed performance, Category CS III. It is also classified as T according to EN 998-2 Standards: "Masonry mortar applied in thin layers for internal and external applications", Class M5.

RECOMMENDATIONS

- Do not mix **Porocol FF** with gypsum, cement, sand or other materials.
- Do not install too many layers of blocks until the underlying adhesive has acquired enough strength to bear the weight of the blocks.
- If **Porocol FF** must come into contact with gypsum or anhydrite, apply a coat of **Primer G** or **Primer S** beforehand.
- Do not apply **Porocol FF** at a thickness of more than 10 mm per layer.

APPLICATION PROCEDURE

The wall elements must be dimensionally stable, sound and free of loose parts, oil, grease and any other substance which could compromise the bond.

Porocol FF may also be applied on blocks which are slightly damp, although it will take longer to harden.

Particularly absorbent blocks or blocks laid in hot weather may need to be wetted beforehand. We also recommend dampening blocks when **Porocol FF** is applied as a smoothing and levelling layer at thicknesses of less than 3 mm.

Before applying **Porocol FF** for rendering or smoothing over surfaces, the walls must be brushed down to remove all traces of dust and loose parts.

Porocol FF



Laying Porocol FF on the surface of the wall with a special notched trowel



Laying Porocol FF on the upright faces of the blocks

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

Type of mortar (EN 998-1):	GP - General purpose mortar for internal/external render		
Type of mortar (EN 998-2):	T - Masonry mortar with guaranteed performance, applied in thin layers for internal and external applications		
Appearance:	powder		
Colour:	white		
Maximum diameter of aggregate (EN 1015-1) (mm):	1		
Bulk density (kg/m ³):	1,500		
Chloride content (EN 1015-17) (%):	EN 998-1	EN 998-2	Performance of product
	not required	< 0.1	< 0.05

APPLICATION DATA (at +20°C - 50% R.H.)

Mixing ratio:	100 parts of Porocol FF with 27-29 parts of water (6.75-7.25 litres of water per 25 kg bag of the product)
pH of mix:	approx. 12
Consistency of fresh mortar (EN 1015-3) (mm):	47
Density of fresh mortar (EN 1015-6) (kg/m ³):	1,510
Porosity of the mix while still fresh (EN 1015-7) (%):	11.5
Application temperature range:	from +5°C to +35°C
Workability time of fresh mortar (EN 1015-9):	approx. 2-3 hours
Minimum applicable thickness (mm):	1
Maximum applicable thickness per layer (mm):	10
Initial hardening time:	24 hours
Complete hardening:	14 days

FINAL PERFORMANCE (27% mixing water)

Performance characteristic	Test Method	Requirements according to EN 998-1	Requirements according to EN 998-2	Performance of product
Compressive strength after 28 days (N/mm ²):	EN 1015-11	CS I (from 0.4 to 2.5)	from Class M 1 (> 1 N/mm ²) to Class M d (> 25 N/mm ²)	> 5 (Category CS III) (Class M 5)
		CS II (from 1.5 to 5.0)		
		CS III (from 3.5 to 7.5)		
		CS IV (≥ 6)		
Bond strength to substrate (brickwork) (N/mm ²):	EN 1015-2	declared value and failure type (FP)	not required	> 0.9 Failure mode (FP) = B
Initial shear strength (f _{vol}) (N/mm ²):	EN 998-2 Appendix C	not required	declared value	0.30
Capillary action water absorption [kg/(m ² ·min. ^{0.5})]:	EN 1015-18	from category WØ to category W2	declared value	Category WØ 0.6
Coefficient of permeability to water vapour (μ):	EN 1015-19	chart value	chart value	5/20
Thermal conductivity (λ _{10,dry}) (W/m·K):	EN 1745	chart value	chart value	0.4 (P = 50°C)
Reaction to fire:	EN 13501-1	Euroclass	Euroclass	A1
Fire resistance:	EN 1364-1	not required	not required	EI 240-E 120

Preparation of the product

Porocol FF must be mixed with 27-29% of clean water (25 kg of **Porocol FF** in 6.75-7.25 litres of water) until a smooth, lump-free paste is formed (we recommend using a mechanical mixer). Always add the powder to the water. Once mixed, **Porocol FF** remains workable for 2-3 hours.

Spreading the mix

1. For laying blocks

Spread on **Porocol FF** in an even layer over the entire surface of the wall using a trowel and, if necessary, calibrate the sides of the area applied (the thickness is normally a few millimetres thick). Apply the product using the same technique on the upright faces of each block before laying the next one to guarantee a good bond also between the ends of each block. It is easier to apply **Porocol FF** if a special notched trowel with the same width as the wall is used.

The open time of **Porocol FF** varies according to the surrounding conditions when laying is carried out. Unfavourable climatic conditions (such as direct sun, dry winds and high temperatures) may considerably reduce the open time. Therefore, make sure a skin does not form on the surface and that it is still "fresh". If skin does form on the surface (while the product remains pasty through the thickness of the layer) pass over the surface and re-spread the mortar with a trowel or notched spatula. Blocks laid with **Porocol FF** must not be exposed to leeching, driving rain or vertical and side loads for at least 24 hours and must be protected from freezing weather conditions for at least 5-7 days after laying.

2. For smoothing over blocks

Spread **Porocol FF** on the surface with a trowel to smooth over the surface at the thickness required, up to a maximum of 10 mm. A perfect surface finish may be obtained by smoothing with a sponge float. In all cases, to make sure the substrate is perfectly buttered, we recommend applying a feather-edge layer of **Porocol FF** before applying the smoothing layer at the thickness required while pressing down on the surface with the trowel to make sure the product bonds perfectly to the substrate.

Cleaning

Mortar which has not yet hardened may be washed from tools used during preparation and application with water. Once hardened, cleaning is much more difficult and must be carried out mechanically.

CONSUMPTION

- For flat block walls: 2-4 kg/m².
- Used as a smoothing and levelling compound: 1.2 kg/m² per cm of thickness.

PACKAGING

Porocol FF is supplied in 25 kg paper bags.

STORAGE

12 months in a dry environment in its original, unopened packaging. The product complies with the prescriptions n. 1907/2006 (REACH) - Annex XVII, Item 47.

SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

Porocol FF contains cement that when in contact with sweat or other body fluids causes irritant alkaline reaction and allergic reactions to those predisposed. It can cause damage to eyes. During use wear protective gloves and goggles and take the usual precautions for handling chemicals. In case of contact with eyes or skin wash immediately with plenty of water and seek medical attention.

For further and complete information about a safe use of our product please refer to our latest version of the Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation. The most up-to-date TDS can be downloaded from our website www.mapei.com.

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

All relevant references for the product are available upon request and from www.mapei.com



Laying blocks on **Porocol FF** still fresh



Smoothing over the surface of blocks with **Porocol FF**

Porocol FF



BUILDING THE FUTURE