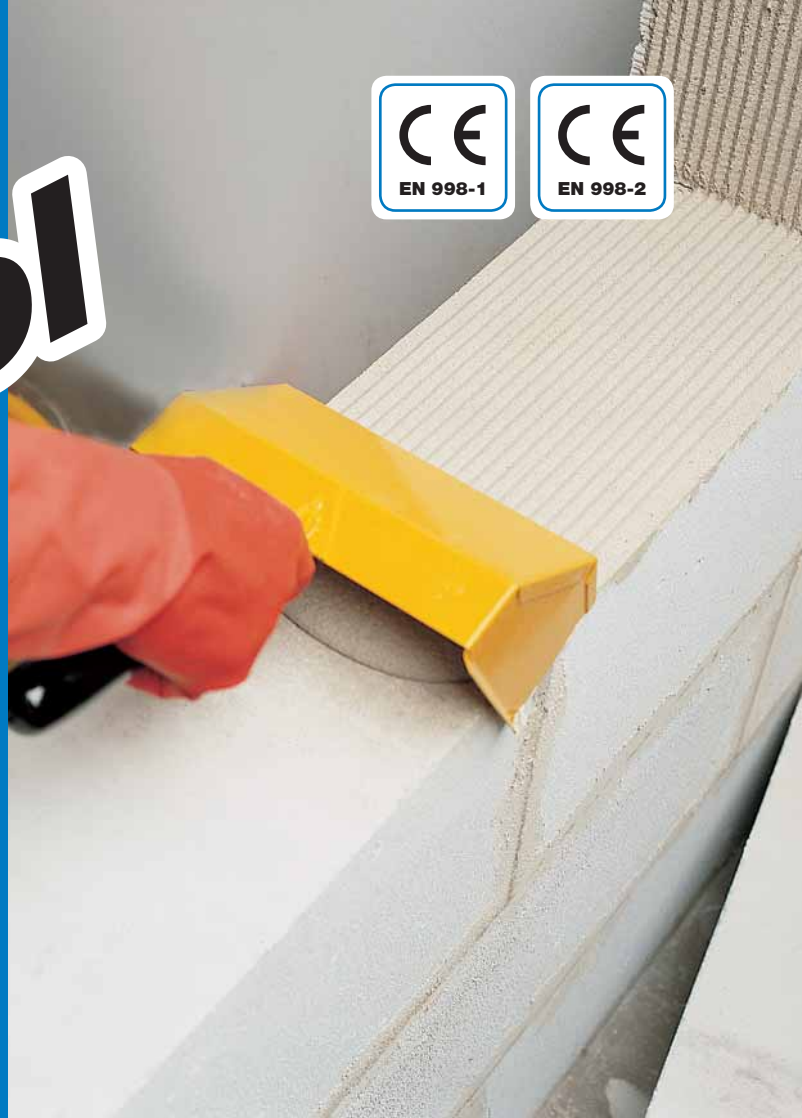




# POROCOL

**Cementitious-based adhesive mortar in powder form for breeze-block walls. Fire resistance class REI 180**



## WHERE TO USE

- Preparation of interior and exterior masonry blocks and panels in expanded concrete, calcium silicate, and cellular brick.
- Plaster and levelling compounds for interiors and exteriors.

## TECHNICAL CHARACTERISTICS

**Porocol** is a whitish powder composed of cement, selected fine aggregates, synthetic resins and special additives, produced according to a formula developed in the MAPEI research laboratories.

**Porocol** when mixed with water becomes an easily workable mortar with high adhesivity and thixotropy that is easily applied to horizontal and vertical surfaces.

**Porocol** hardens without appreciable shrinkage and develops remarkable strength, adhering perfectly to all materials normally used in construction. It is resistant to water and frost.

## RECOMMENDATIONS

- Do not mix **Porocol** with gypsum, cement, sand or other materials used in building.
- Do not lay an excessive number of blocks over the adhesive before it develops enough mechanical strength to support the load.
- When **Porocol** is applied over gypsum or anhydrite, apply a coat of **Primer G** or **Primer S**.

- Do not use **Porocol** in thicknesses greater than 15 mm per coat.

## APPLICATION PROCEDURE

Masonry elements must be dimensionally stable, sound, free of loose material, dust, oils, grease and other matter that might interfere with bonding.

**Porocol** can be used with blocks that are slightly wet, in which case, however, hardening is delayed.

Blocks may require wetting beforehand only if especially absorbent or if used in very hot weather. Wetting slightly is recommended when **Porocol** is applied as a finishing compound in thicknesses less than 3 mm.

When **Porocol** is used as a plaster or smoothing compound, walls must be brushed clean to eliminate dust or crumbling material.

## Preparing the mix

**Porocol** should be mixed with 23-25% clean water (25 kg of **Porocol** in 5.5-6.0 lt of water) until an even mix is obtained, without lumps (a mechanical stirrer is recommended).

Always add the powder into the water. The mix with **Porocol** maintains workability for 2-3 hours after mixing.

## Applying the mix

### 1) For building walls

Apply **Porocol** evenly with a trowel over the entire thickness of the wall, calibrating alignment, if necessary (thickness is usually several mm.).

TECHNICAL DATA (typical values)				
<b>PRODUCT IDENTITY</b>				
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:	very light grey			
Maximum diameter of aggregate (EN 1015-1) (mm):	1			
Bulk density (kg/m <sup>3</sup> ):	1,500			
Chloride content (EN 1015-17) (%):	<b>EN 998-1</b>	<b>EN 998-2 of product</b>	<b>Performance</b>	
	not required	< 0,1	< 0,01	
Storage:	12 months in a dry area in its original packaging			
Hazard classification according to EC 1999/45:	irritant. Before using, refer to the "Safety instructions for preparation and installation" paragraph and the information on the packaging and Safety Data Sheet			
<b>APPLICATION DATA (at +20°C - 50% R.H.)</b>				
Mixing ratio:	100 parts of <b>Porocol</b> with 23-25 parts of water (5.75-6.25 litres of water per 25 kg sack of the product)			
pH of mix:	approx. 12			
Consistency of fresh mortar (EN 1015-3) (mm):	155			
Density of fresh mortar (EN 1015-6) (kg/m <sup>3</sup> ):	1,570			
Porosity of the mix while still fresh (EN 1015-7) (%):	24.5			
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):	15			
Initial hardening time:	24 hours			
Complete hardening:	14 days			
<b>FINAL PERFORMANCE (16.5% mixing water)</b>				
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 <sup>2</sup> ):	EN 1015-11	CS I (from 0.4 to 2.5)	from Class M 1 (> 1 N/mm <sup>2</sup> ) to Class M d (> 25 N/mm <sup>2</sup> )	> 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 <sup>2</sup> ):	EN 1015-12	declared value and failure type (FP)	not required	> 1.00 Failure mode (FP) = B
Initial shear strength (f <sub>vok</sub> ) (N/mm <sup>2</sup> ):	EN 1052-3	not required	declared value	0.30
Capillary action water absorption [kg/(m <sup>2</sup> ·min <sup>0.5</sup> )]:	EN 1015-18	from category W 0 to category W 2	declared value	Category W 0 < 0.6
Coefficient of permeability to water vapour (μ):	EN 1015-19	declared value	chart value	< 12 5/20
Reaction to fire:	EN 13501-1	value declared by manufacturer	value declared by manufacturer	Euroclass A1

**Porocol** should be applied with the same technique on the vertical wall surface of each block before placing into position the next, so as to anchor the various elements in front as well.

Applying **Porocol** is made easier by using special notched trowels the same width as the block.

The open time of **Porocol** under normal temperature and humidity conditions is several minutes; unfavourable conditions (hot sun, dry winds, high temperatures) can drastically reduce open time. The adhesive should therefore be checked to make sure it has not formed a skin on the surface and that it is still "fresh".

If skinning occurs (while the adhesive remains still fresh underneath), re-work the adhesive by re-spreading it with a notched trowel.

Blocks installed with **Porocol** should not be soaked with water, exposed to heavy rain, or subject to vertical loads or lateral pressure for at least 24 hours. They should be protected from frost for at least 5-7 hours after installation.

#### 2) For renders/plaster

Spread **Porocol** with trowel to a maximum thickness of 15 mm and smooth with float. Applying a scratch coat to the substrate is recommended in order to guarantee thorough wetting. Then spread **Porocol** immediately in the thickness required for levelling, exerting enough pressure with the trowel to ensure that the mix bonds well to the substrate.

#### Cleaning

Tools and hands can be cleaned with plenty of water.

#### COVERAGE

For horizontal block surfaces: from 5-7 kg per m<sup>2</sup> of surface to be bonded.

For renders/plaster: 1.4 kg/m<sup>2</sup> per mm of thickness.

#### PACKAGING

**Porocol** is available in 25 kg bags.

#### SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

**Porocol** contains cement that, when in contact with sweat or other bodily fluids, produces an irritant alkaline reaction. Wear protective clothing, gloves and eye/face protection.

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

FOR PROFESSIONALS.

#### WARNING

*Although the technical details and recommendations contained in this report 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 applications; 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 web site [www.mapei.com](http://www.mapei.com)**

**All relevant references for the product are available upon request and from [www.mapei.com](http://www.mapei.com)**



**Porocol**



**BUILDING THE FUTURE**

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