



# Triblock Finish

**Three-component epoxy-cementitious thixotropic mortar for smoothing off damp substrates**

## WHERE TO USE

For protecting and smoothing out vertical and horizontal concrete surfaces subject to damp, and for which good chemical resistance and high resistance to abrasion is required.

## Some application examples

- Covering concrete channels, drains and pipe-work.
- Covering damp concrete surfaces before applying protective and anti-corrosion epoxy products, or polyurethane covering systems which are impermeable to water vapour.

## TECHNICAL CHARACTERISTICS

**Triblock Finish** is a three-component, epoxy-cementitious system made up of cementitious binders and epoxy resin in water dispersion. It has the capacity of curing on damp indoor and outdoor surfaces, and of forming a compact, waterproof, abrasion-resistant layer which, if required, is suitable for coating with epoxy and polyurethane products. It is produced according to a formula developed in MAPEI's Research Laboratories.

**Triblock Finish** meets the requirements defined by EN 1504-9 (*"Products and systems for the protection and repair of concrete structures – Definitions, requirements, quality control and evaluation of conformity – General principles for the use of products and systems"*) and the minimum requirements claimed by EN 1504-2 coating (C)

according to MC and IR principles (*"Surface protection systems for concrete"*).

## RECOMMENDATIONS

- Do not apply **Triblock Finish** directly on:
  - surfaces with a surface film of water;
  - dusty, flaky or flimsy surfaces;
  - anhydrite or gypsum-based substrates;
  - old, gypsum-based smoothing layers.
- Do not apply **Triblock Finish** on cracks which are subject to movement, the product is rigid and may also crack.

## APPLICATION PROCEDURE

### Preparation of the substrate

The cementitious substrate must be solid, mechanically strong, perfectly clean and free of crumbly parts, materials which could impede bonding, such as wax, oil and grease, and free-standing water. The surface may be prepared by either sand-blasting or hydro-sand-blasting, according to the condition of the substrate. Saturate the substrate with water, and wait until the excess water has evaporated off. If necessary, compressed air may be used to remove free-standing water.

### Preparation of the product

**Triblock Finish** is made up of three components, of which two are liquid and one is a powder. To prepare the product, mix component A with component B until a homogenous, uniform-coloured, mix is obtained. Then slowly add component C

TECHNICAL DATA (typical values)			
<b>PRODUCT IDENTITY</b>			
	<b>comp. A</b>	<b>comp. B</b>	<b>comp. C</b>
<b>Consistency:</b>	liquid	liquid	powder
<b>Colour:</b>	white	straw yellow	grey
<b>Maximum size of aggregate (mm):</b>	–	–	0.25
<b>Density (g/cm<sup>3</sup>):</b>	1.1	1.01	–
<b>Brookfield viscosity (mPa·s):</b>	9,000 (n° 5 needle - 10 revs)	50 (n° 1 needle - 50 revs)	– –
<b>APPLICATION DATA (at +23°C - 50% R.H.)</b>			
<b>Mixing ratio:</b>	comp A : comp B : comp C = 4.8 : 15.2 : 80		
<b>Colour of mix:</b>	grey		
<b>Consistency of mix:</b>	thixotropic-trowelable		
<b>Density of mix (kg/m<sup>3</sup>):</b>	2,000		
<b>Brookfield viscosity of mix (mPa·s):</b>	35,000 (N° 5 needle - 10 revs)		
<b>Application temperature range:</b>	from +5°C to +30°C		
<b>Pot life of mix:</b>	40 min.		
<b>Maximum applied thickness (mm):</b>	3		
<b>Ready for painting over:</b>	from a minimum of 24 hours to a maximum of 7 days		
<b>FINAL PERFORMANCES</b>			
Performance characteristic	Test method	Requirements according to EN 1504-2 coating (C) principles MC and IR	Performance of product
<b>Compressive strength (N/mm<sup>2</sup>):</b>	EN 12190	not required	≥ 45 (after 28 days)
<b>Flexural strength (N/mm<sup>2</sup>):</b>	EN 196/1	not required	≥ 9 (after 28 days)
<b>Bond strength on concrete (substrate in MC 0.40 – w/c ratio = 0.40) according to EN 1766 (N/mm<sup>2</sup>):</b>	EN 1542	For rigid systems with no traffic: ≥ 1.0 with traffic: ≥ 2.0	> 3 (after 28 days)
<b>Thermal compatibility measured as bond strength according to EN 1542 (N/mm<sup>2</sup>): – freeze-thaw cycles with de-icing salts:</b>	EN 13687/1	For rigid systems with no traffic: ≥ 1.0 with traffic: ≥ 2.0	> 3 (after 50 cycles)
<b>Impermeability expressed as coefficient of permeability to free water (kg/m<sup>2</sup>·h<sup>0.5</sup>):</b>	EN 1062-3	W < 0.1	W < 0.04
<b>Permeability to water vapour – equivalent air thickness S<sub>D</sub> - (m):</b>	EN ISO 7783-2	Class I S <sub>D</sub> < 5 m Class II 5 m ≤ S <sub>D</sub> ≤ 50 m Class III S <sub>D</sub> > 50 m	S <sub>D</sub> < 0.5 Class I (permeable to water vapour)
<b>Reaction to fire:</b>	EN 13501-1	Euroclass	A2-s1,d0

(powder) while mixing until a smooth, lump-free paste is obtained. The mixing ratio between the three components is 4.8 : 15.2 : 80 by weight.

If the entire contents are not required, make sure that the mixing ratios are strictly adhered to in order to avoid poor catalysing of the product.

Once prepared, **Triblock Finish** is workable for 40 minutes at +23°C, and so the product must be applied within the times indicated.

For mixing, we recommend using a low-speed drill to avoid overheating the mix, which may reduce the workability times and provoke air entrapment.

#### **Application of the product**

Spread **Triblock Finish** uniformly on the surface to be treated using a metal trowel.

If the substrate is highly absorbent, we recommend applying an initial thin layer of **Triblock Finish** with a trowel to close all the pores, or a layer of a mixture of components A + B with a brush. Once hardened, apply a second layer of

**Triblock Finish** at a thickness between 0.5-3 mm. Finish with a sponge tamper after approximately 30 minutes.

The tamping operation is not recommended if a successive protective epoxy or polyurethane covering layer is to be applied. In this case, the surface must be sanded down.

**Triblock Finish** must be protected from driving rain for at least 24 hours after application.

#### **Laying protective epoxy and polyurethane coatings**

The product may be painted over after approximately 24 hours. The hardened layer of **Triblock Finish** may be covered with any type of epoxy or polyurethane coating, either with or without solvents. Where necessary, apply the specific primer beforehand as indicated in the relevant Technical Data Sheet.

#### **Cleaning**

Clean all work tools with water before **Triblock Finish** sets. Once it has set, cleaning may only be carried out by mechanical means.

#### **CONSUMPTION**

2 kg/m<sup>2</sup> per mm of thickness.

#### **PACKAGING**

31.25 kg kits (A + B + C):  
component A: 1.5 kg;  
component B: 4.75 kg;  
component C: 25 kg.

#### **STORAGE**

12 months in its original, closed containers. Component C contains cement, which complies with the conditions of Annex XVII to Regulation (EC) N° 1907/2006 (REACH), item 47.

Protect against frost and store at a temperature of at least +5°C.

#### **SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION**

**Triblock Finish** components A, B and C are irritant for the skin and eyes, and may cause sensitisation in those predisposed.

**Triblock Finish** component C contains cement that when in contact with sweat or other body fluids causes irritant alkaline reaction and allergic reactions to those predisposed. When applying the product, we recommend using protective gloves and goggles and to take the usual precautions for handling chemical products. In case of contact with eyes or skin wash immediately with plenty of water and seek medical attention.

**Triblock Finish** component A and B are also hazardous for aquatic life, do not dispose of the products in the environment. For further and complete information about the safe use of our product please refer to the latest version of our Material 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](http://www.mapei.com)**

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