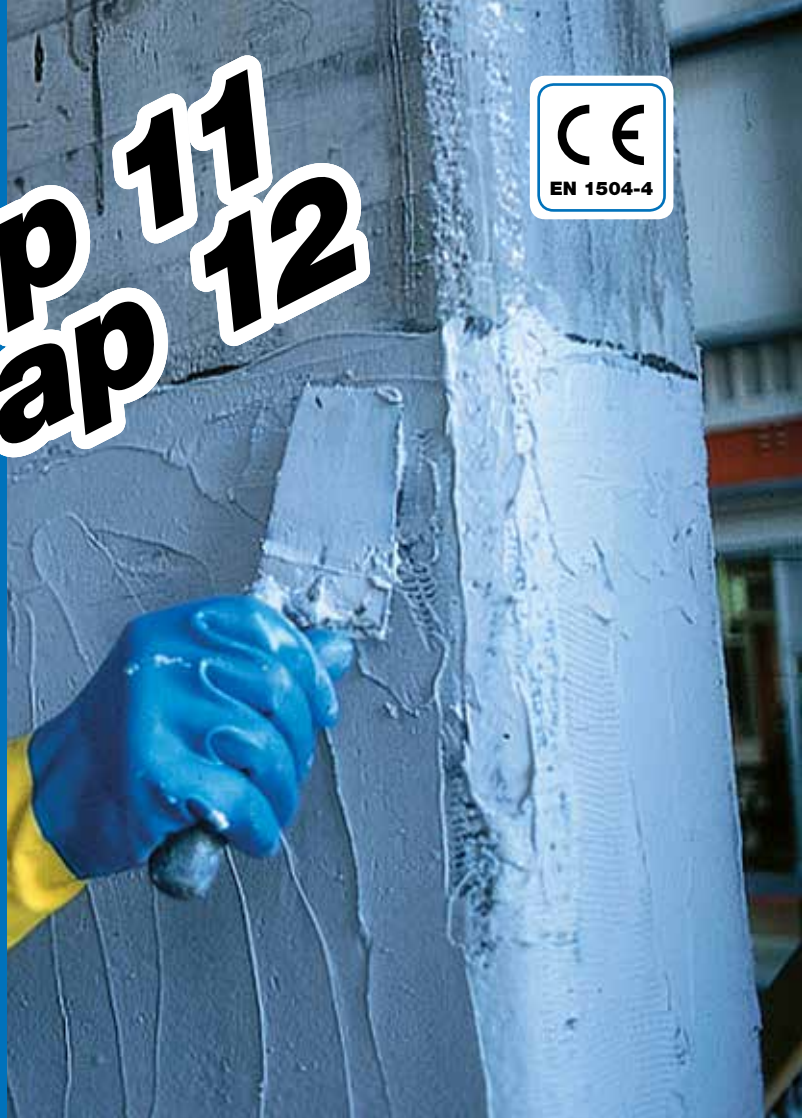




MapeWrap 11 MapeWrap 12



Thixotropic epoxy putties for levelling concrete surfaces and for structural bonding

WHERE TO USE

Levelling concrete, reinforced concrete or masonry surfaces before applying **MapeWrap** fabrics.

TECHNICAL CHARACTERISTICS

MapeWrap 11 and **MapeWrap 12** are two-component epoxy resin based products with selected fine graded aggregates and special additives developed in the MAPEI Research & Development Laboratories.

After mixing **MapeWrap 11** component A or **MapeWrap 12** component A with their relative hardener (component B), they become a thixotropic paste, easy to apply both on vertical surfaces and on soffits.

The two products differ from each other only for the workability time: **MapeWrap 11** is suitable for applications at temperatures between +5°C and +23°C, while **MapeWrap 12** is recommended in hot climates.

MapeWrap 11 and **MapeWrap 12** harden without shrinkage, becoming extremely tacky and mechanically strong.

MapeWrap 11 and **MapeWrap 12** respond to the principles defined in EN 1504-9 (*"Products and systems for protecting and repairing concrete structures: definitions, requirements, quality control and conformity evaluation. General principles for the use and application of systems"*), and the minimum requirements for EN 1504-4 (*"Structural bonding"*).

RECOMMENDATIONS

- **MapeWrap 11** and **MapeWrap 12** must not be used on wet surfaces.
- **MapeWrap 11** and **MapeWrap 12** must not be used on dirty or crumbling surfaces.

APPLICATION PROCEDURE

Preparing the substrate

Treat the substrate with **MapeWrap Primer 1** before applying **MapeWrap 11** or **MapeWrap 12**.

Preparing the mixes

The two components of **MapeWrap 11** and **MapeWrap 12** must be mixed together. Pour component B (white) into component A (grey) and mix with a slow speed drill fitted with a stirrer until the resin is completely homogeneous (completely grey). The products come already pre-dosed therefore do not use partial quantities to avoid the risk of accidental ratio errors that could prevent **MapeWrap 11** and **MapeWrap 12** from hardening. If only partial quantities are required, use a high-precision electronic scale.

Applying the mixes

MapeWrap 11 and **MapeWrap 12** can be applied on concrete, stone, brick or metal with a flat trowel after the substrate has been primed with **MapeWrap Primer 1**.

In order to obtain good levelling, it is recommended

MapeWrap 11 MapeWrap 12



Preparing the substrate



Applying a coat of
MapeWrap Primer 1



Levelling with
MapeWrap 11 or
MapeWrap 12

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

	component A	component B
Consistency:	thick paste	thick paste
Colour:	grey	white
Density (kg/l):	1.72	1.55
Brookfield viscosity (Pa·s):	900 (rotor F - 5 revs)	600 (rotor D - 2.5 revs)

APPLICATION DATA OF PRODUCT (at +23°C - 50% R.H.)

	MapeWrap 11	MapeWrap 12
Mixing ratio:	component A : component B = 3 : 1	
Consistency of mix:	thixotropic paste	thixotropic paste
Colour of mix:	grey	grey
Density of mix (kg/l):	1.70	1.70
Brookfield viscosity (Pa·s):	800 (rotor F - 5 revs)	
Workability time (EN ISO 9514):		
- at +10°C:	60 minutes	150 minutes
- at +23°C:	35 minutes	50 minutes
- at +30°C:	25 minutes	35 minutes
Setting time:		
- at +10°C:	7-8 hours	14-16 hours
- at +23°C:	3 hours-3 hours 30 minutes	4-5 hours
- at +30°C:	1 hour 30 minutes-2 hours	2 hours 30 minutes-3 hours
Application temperature range:	from +5°C to +30°C	from +10°C to +30°C
Complete hardening time:	7 days	

FINAL PERFORMANCE

Performance characteristic	Test method	Requirements according to EN 1504-4	Performance of product	
			MapeWrap 11	MapeWrap 12
Linear shrinkage (%):	EN 12617-1	≤ 0.1	0 (at +23°C) 0.05 (at +70°C)	0 (at +23°C) 0.03 (at +70°C)
Compressive modulus of elasticity (N/mm ²):	EN 13412	≥ 2,000	6,000	6,000
Coefficient of thermal expansion:	EN 1770	≤ 100 x 10 ⁻⁶ K ⁻¹ (measured between -25°C and +60°C)	43 x 10 ⁻⁶ K ⁻¹	46 x 10 ⁻⁶ K ⁻¹
Glass transition temperature:	EN 12614	≥ +40°C	> +40°C	> +40°C
Durability (freeze/thaw and hot, damp cycles):	EN 13733	compressive shear load > tensile strength of concrete no failure of steel test sample	meets specifications	meets specifications
Reaction to fire:	Euroclass	according to value declared by manufacturer	B-s1, d0	C-s1, d0
Concrete-steel bond strength (N/mm ²):	EN 1542	not required	> 3 (failure of concrete)	
Concrete-Carboplate bond strength (N/mm ²):	EN 1542	not required	> 3 (failure of concrete)	

BONDED MORTAR OR CONCRETE

	Test method	Requirements	MapeWrap 11	MapeWrap 12
Bond strength to concrete:	EN 12636	failure of concrete	meets specifications	meets specifications
Sensitivity to water:	EN 12636	failure of concrete	meets specifications	meets specifications
Shear strength (N/mm ²):	EN 12615	≥ 6	> 10	> 10
Compressive strength (N/mm ²):	EN 12190	≥ 30	> 70	> 70

STRENGTHENING USING BONDED PLATE

	Test method	Requirements	MapeWrap 11	MapeWrap 12
Shear strength (N/mm ²):	EN 12188	≥ 12	50° > 35 60° > 29 70° > 25	50° > 28 60° > 25 70° > 22
Bond strength: - pull out (N/mm ²):	EN 12188	≥ 14	> 18	> 18
Bond strength: - inclined shear strength (N/mm ²):	EN 12188	50° ≥ 50 60° ≥ 60 70° ≥ 70	50° > 73 60° > 69 70° > 80	50° > 58 60° > 60 70° > 70

to let the product penetrate well into particularly uneven areas.

Apply, with a notched trowel, approximately a 1 mm layer of **MapeWrap 11** or **MapeWrap 12**, depending on the temperature, over the still fresh **MapeWrap Primer 1**. Use a flat trowel to completely level even the most uneven parts of the surface.

Use the same product to fill and round the corners in order to create a profile with a bending radius not less than 2 cm.

MapeWrap 11 or **MapeWrap 12** must be applied within their pot-life, therefore timing is vital in order to use the whole pack within the given time.

The **MapeWrap** fabrics must be applied over the still fresh **MapeWrap 11** or **MapeWrap 12**.

PRECAUTIONS TO BE TAKEN BEFORE APPLICATION

No special precautions need to be taken at temperatures between +5°C and +30°C. In hot weather do not expose the material to direct sunlight. Levelling should be carried out during the cooler hours.

Cleaning

Due to the strong adhesion of **MapeWrap 11** and **MapeWrap 12** also on metal, it is recommended to wash the working tools with solvents (ethyl alcohol, toluol, etc.) before the product dries.

CONSUMPTION

1.55 kg/m² per mm of thickness.

PACKAGING

2 kg units (component A = 1.5 kg, component B = 0.5 kg).

6 kg units (component A = 4.5 kg, component B = 1.5 kg).

STORAGE

The products must be stored for 24 months in the original packaging and at temperatures not below +5°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

MapeWrap 11 and **MapeWrap 12** part A are irritant for skin and eyes. Both part A and part B can cause sensitization if they come in contact with the skin of those subjects predisposed.

MapeWrap 11 and **MapeWrap 12** part B are corrosive and can cause burns. Furthermore, **MapeWrap 11** part B can cause irreversible damages with prolonged use. Do not use in the presence of pregnant women. The product contains low molecular weight epoxy resins

that may cause sensitisation if cross contamination occurs with other epoxy compounds. During use, wear protective gloves, goggles, protective clothes, use a safety mask to protect the respiratory system and work only in well-ventilated areas. If the product comes in contact with the eyes or skin, wash immediately with plenty of clean water and seek medical attention. When the product reacts it generates considerable heat. After mixing components A and B we recommend applying the product as soon as possible and to never leave the container unguarded until it is completely empty.

MapeWrap 12 part A and B are dangerous for aquatic life. Do not dispose of them into the environment.

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

PRODUCT ONLY 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

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MapeWrap 11
MapeWrap 12



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