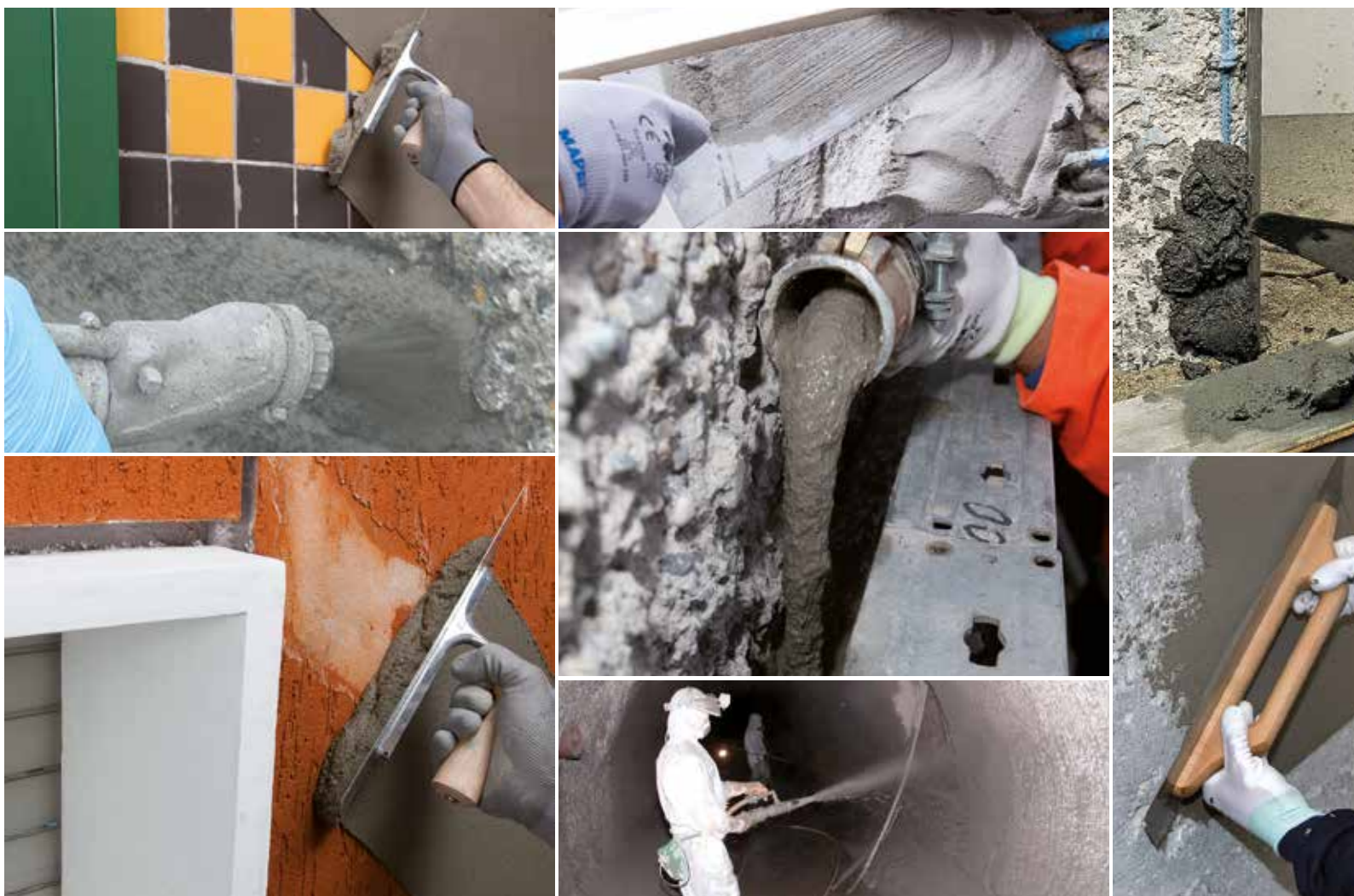


SELECTION CHART OF REPAIR AND SMOOTHING MORTARS



MAPEI MORTARS FOR REPAIRING CONCRETE

REPAIRING CONCRETE WITH SHRINKAGE-COMPENSATED MORTAR AND MICRO-CONCRETES

Mapegrout Thixotropic: Shrinkage-compensated fibre-reinforced mortar for repairing concrete. Class R4 EN 1504-3.

Mapegrout T40: Medium-strength (40 MPa) thixotropic mortar for repairing concrete. Class R3 EN 1504-3.

Mapegrout T60: Sulphate-resistant thixotropic fibre-reinforced mortar for repairing concrete. Class R4 EN 1504-3.

Mapegrout FMR: Shrinkage-compensated sulphate-resistant thixotropic mortar fibre-reinforced with flexible metal alloy fibres particularly suitable for repairing concrete structures where higher ductility is required. Class R4 EN 1504-3.

Mapegrout FMR-PP: Shrinkage-compensated, sulphate-resistant thixotropic mortar with work-hardening behaviour reinforced with structural polymer fibres, particularly suitable for repairing concrete structures where high ductility is required. Class R4 EN 1504-3.

Mapegrout Easy Flow: One-component shrinkage-compensated sulphate-resistant thixotropic fibre-reinforced mortar particularly suitable for repairing concrete structures with a rendering machine. Class R4 EN 1504-3.

Mapegrout Easy Flow GF: One-component shrinkage-compensated sulphate-resistant thixotropic mortar fibre-reinforced with inorganic fibres for repairing concrete structures where higher ductility is required. Class R4 EN 1504-3.

Mapegrout BM: Two-component low modulus cementitious mortar for repairing concrete. Class R4 EN 1504-3.

Mapegrout Fast-Set: Shrinkage-compensated rapid-setting and hardening fibre-reinforced mortar for repairing concrete. Class R3 EN 1504-3.

Planitop 400: Rapid-setting shrinkage-compensated thixotropic mortar applied in a single layer from 1 to 40 mm thick for repairing the surface of concrete. Class R3 EN 1504-3.

Mapegrout LM2K: Two-component low modulus thixotropic fibre-reinforced cementitious mortar with added organic-based corrosion inhibitor applied in a single layer from 3 to 20 mm thick for repairing concrete. Class R3 EN 1504-3.

Mapegrout 430: Fine-textured, normal-setting thixotropic fibre-reinforced mortar for repairing concrete. Class R3 EN 1504-3.

Mapegrout Betontech HPC: Free-flowing, shrinkage compensated cementitious grout, with added polymer fibre reinforcement, with a work-hardening effect, for restoring concrete requiring a high level of ductility. Class R4 EN 1504-3.

Mapegrout Betontech HPC10: Free-flowing micro-concrete, with added polymer fibre reinforcement, with a work-hardening effect, for restoring concrete requiring a high level of ductility. Class R4 EN 1504-3.





Mapegrout Hi-Flow: Shrinkage-compensated fibre-reinforced mortar for repairing concrete. Class R4 EN 1504-3.

Mapegrout Hi-Flow B2: Shrinkage-compensated free-flowing fibre-reinforced micro-concrete for repairing to concrete structures. Class R4 EN 1504-3.

Mapegrout Hi-Flow GF: Fluid, compensated shrinkage cementitious mortar fibre-reinforced with inorganic fibres, for repairing concrete structures where higher ductility is required. Class R4 EN 1504-3.

Mapegrout Hi-Flow TI 20: Shrinkage-compensated free-flowing high ductility cementitious mortar fibre-reinforced with stiff steel fibres for repairing concrete structures. Class R4 EN 1504-3.

Mapegrout GF Betoncino B1: Free-flowing, shrinkage-compensated cementitious mortar reinforced with inorganic fibres for repairing concrete structures where higher ductility is required. Class R4 EN 1504-3.

Planitop Smooth & Repair: R2-class, rapid-setting shrinkage-compensated, thixotropic, fibre-reinforced, cementitious mortar applied in a single layer between 3 and 40 mm thick, for repairing and smoothing concrete. Class R2 EN 1504-3 and EN 1504-2 coating (C) principles MC and IR. Certified GEV-EMICODE EC1 R Plus with very low emission level of volatile organic compounds (VOC).

Planitop Smooth & Repair R4: Structural R4-class, rapid-setting, shrinkage-compensated, thixotropic, fibre-reinforced, cementitious mortar, applied in a single layer between 3 and 40 mm thick, for repairing and smoothing concrete. Class R4 EN 1504-3 and EN 1504-2 coating (C) principles MC and IR. Certified GEV-EMICODE EC1 R Plus with very low emission level of volatile organic compounds (VOC).

Mapefill MF 610: Expansive mortar for precision anchoring in thick layers. Class R4 EN 1504-3 and EN 1504-6 (Anchoring of reinforcing bars).

Mapegrout SV: Rapid-setting and hardening shrinkage-compensated free-flowing mortar for repairing concrete and anchoring drains, manholes and highway coating materials. Class R4 EN 1504-3.

Mapegrout SV T: Rapid-setting and hardening shrinkage-compensated thixotropic mortar for repairing concrete and anchoring drains, manholes and highway coating materials. Class R4 EN 1504-3.

Mapegrout SV Fiber: Rapid-setting and hardening shrinkage-compensated free-flowing high ductility cementitious mortar fibre-reinforced with stiff steel fibres for repairing concrete at temperatures down to -5°C. Class R4 EN 1504-3.

REPAIRING CONCRETE WITH CEMENTITIOUS BINDERS

Stabilcem: Expansive super-fluid cementitious binder for mixing with injection slurry, mortar and concrete.

Stabilcem SCC: Cementitious binder for mixing self-compacting, volumetrically-stable cement and concrete for repairing concrete structures.

OVERVIEW OF MAPEI MORTARS AND MICRO-CONCRETES FOR REPAIRING CONCRETE

		Normal-setting thixotropic mortars										
		Mapegrout Thixotropic	Mapegrout T40	Mapegrout T60	Mapegrout FMR	Mapegrout FMR-PP	Mapegrout Easy Flow	Mapegrout Easy Flow GF	Mapegrout BM	Mapegrout LM2K	Mapegrout 430	
Type of repair	Repair of the concrete cover	•	•	•	•	•	•	•	•	•	•	•
	Structural repair	•	•	•	•	•	•	•	•	•	•	•
Classification according to EN 1504-3		R4	R3	R4	R4	R4	R4	R4	R4	R3	R3	
Application	Trowel/gauging trowel	•	•	•	•	•	•	•	•	•	•	
	Continuous-mix rendering machine										•	
	Rendering machine with pre-mixing unit		•	•	•	•	•	•	•	•	•	
	By pouring											
Civil construction	Repairs to the corners of beams and pillars	•	•	•					•	•	•	
	Repairs to the edges of balconies	•	•	•					•	•	•	
	Repairs to ceilings	•	•	•					•	•	•	
	Repairs to gutters	•	•	•					•	•	•	
	Repairs to parapets	•	•	•					•	•	•	
Industrial construction	Fixing pillars in place											
	Repairs to buffer panels	•	•	•					•	•		
	Repairs to floors								•			
	Repairs to beams and pillars	•	•	•	•	•			•	•		
	Fixing machinery in place											
Infrastructure	Bridges and viaducts	Repairs to piles		•	•	•	•	•	•	•	•	
		Repairs to beams		•	•	•	•	•	•	•	•	
		Repairs to the face of internal floor slabs		•	•	•	•	•	•	•	•	
		Repairs to the face of external floor slabs		•	•	•	•	•	•	•	•	
		Repairs to pulvinoes		•	•	•	•	•	•	•	•	
		Repairs to reinforced concrete bearing elements		•	•	•	•	•	•	•	•	
		Repairs to kerbs			•	•	•	•	•	•	•	
	Repairs to joints in motorways								•			
	Hydraulic construction	Repairs to walls			•	•	•	•	•	•	•	
		Repairs to concrete beds			•	•			•	•	•	
		Repairs to joints			•	•	•	•	•	•	•	
		Repairs to upstream faces			•	•	•	•	•	•	•	
		Repairs to downstream faces			•	•	•	•	•	•	•	
Repairs to overflow channels				•	•	•	•	•	•	•		
Highway maintenance	Fixing inspection shafts, manholes and highway coating materials											

NORMAL-SETTING THIXOTROPIC MORTARS



Characteristics	Mapegrout Thixotropic	Mapegrout T40	Mapegrout T60	Mapegrout FMR	Mapegrout FMR-PP	Mapegrout Easy Flow	Mapegrout Easy Flow GF	Mapegrout BM	Mapegrout LM2K	Mapegrout 430
Class according to EN 1504-3	R4	R3	R4	R4	R4	R4	R4	R4	R3	R3
Maximum size of aggregate	2.5 mm	2.5 mm	2.5 mm	2.5 mm	2.5 mm	2.5 mm	2.5 mm	2.5 mm	1.6 mm	1 mm
Mixing ratio	15.5% - 16.5% water	15.5% - 16.5% water	16.5% - 17.5% water	17% - 18% water	16% - 18% water	16.5% - 17.5% water	15.5% - 16.5% water	Comp. A : Comp. B 5.3 : 1	Comp. A : Comp. B 10 : 2.1	17.5% - 18.5% water
Density of mix	2200 kg/m ³	2200 kg/m ³	2200 kg/m ³	2200 kg/m ³	2100 kg/m ³	2200 kg/m ³	2200 kg/m ³	2100 kg/m ³	2080 kg/m ³	2000 kg/m ³
Application temperature range	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C
Pot life of mix	approx. 1 hour	approx. 1 hour	approx. 1 hour	approx. 1 hour	approx. 1 hour	approx. 1 hour	approx. 1 hour	approx. 1 hour	approx. 1 hour	approx. 1 hour
Compressive strength	> 60 MPa after 28 days	> 40 MPa after 28 days	60 MPa after 28 days	> 64 MPa after 28 days	> 65 MPa after 28 days	> 60 MPa after 28 days	> 60 MPa after 28 days	> 47 MPa after 28 days	≥ 38 MPa after 28 days	> 30 MPa after 28 days
Flexural strength	> 8.5 MPa after 28 days	> 7 MPa after 28 days	8 MPa after 28 days	11 MPa after 28 days	13 MPa after 28 days	> 8 MPa after 28 days	11 MPa after 28 days	> 10 MPa after 28 days	≥ 7 MPa after 28 days	> 6 MPa after 28 days
Compressive modulus of elasticity	26 GPa after 28 days	25 GPa after 28 days	27 GPa after 28 days	27 GPa after 28 days	27 GPa after 28 days	27 GPa after 28 days	27 GPa after 28 days	22 GPa after 28 days	17 GPa after 28 days	23 GPa after 28 days
Adhesion to concrete according to EN 1766	> 2 MPa after 28 days	> 2 MPa after 28 days	> 2 MPa after 28 days	> 2 MPa after 28 days	> 2 MPa after 28 days	> 2 MPa after 28 days	≥ 2 MPa after 28 days	> 2 MPa after 28 days	≥ 2 MPa after 28 days	> 2 MPa after 28 days
Thermal compatibility to freeze/thaw cycles with de-icing salts measured as adhesion according to EN 1542	> 2 MPa	> 1.5 MPa	> 2 MPa	> 2 MPa	> 2 MPa	> 2 MPa	> 2 MPa	> 2 MPa	≥ 2 MPa	> 1.5 MPa
Maximum thickness per layer	30-35 mm	30-35 mm	40 mm	50 mm	50 mm	35 mm	50 mm	35 mm	20 mm	35 mm
Consumption	19 kg/m ² per cm of thickness	18.5 kg/m ² per cm of thickness	18.5 kg/m ² per cm of thickness	19 kg/m ² per cm of thickness	18 kg/m ² per cm of thickness	18.5 kg/m ² per cm of thickness	18.5 kg/m ² per cm of thickness	21 kg/m ² per cm of thickness	approx. 21 kg/m ² per cm of thickness	17 kg/m ² per cm of thickness



Mapegrout Thixotropic



- ▶ Shrinkage-compensated fibre-reinforced mortar for repairing concrete.

CONSUMPTION: 19 kg/m² per cm of thickness.
APPLICATION: trowel, gauging trowel or rendering machine.



Mapegrout T40



- ▶ Medium-strength (40 MPa) thixotropic fibre-reinforced mortar for repairing concrete.

CONSUMPTION: 18.5 kg/m² per cm of thickness.
APPLICATION: trowel, gauging trowel or rendering machine.



Mapegrout T60



- ▶ Sulphate-resistant thixotropic fibre-reinforced mortar for repairing concrete.

CONSUMPTION: 18.5 kg/m² per cm of thickness.
APPLICATION: trowel, gauging trowel or rendering machine.



Mapegrout FMR



- ▶ Shrinkage-compensated sulphate-resistant thixotropic mortar fibre-reinforced with flexible metal alloy fibres particularly suitable for repairing concrete structures where higher ductility is required.

CONSUMPTION: 19 kg/m² per cm of thickness.
APPLICATION: trowel, gauging trowel or rendering machine.



Mapegrout Easy Flow



- ▶ One-component shrinkage-compensated sulphate-resistant thixotropic fibre-reinforced mortar applied with a rendering machine, particularly suitable for repairing concrete structures.

CONSUMPTION: 18.5 kg/m² per cm of thickness if used as is and 14.5 kg/m² if mixed with 30% gravel size 3 to 6-8 mm.
APPLICATION: trowel, gauging trowel or rendering machine.



Mapegrout FMR-PP



- ▶ Shrinkage-compensated, sulphate-resistant thixotropic mortar with work-hardening behavior reinforced with structural polymer fibres, particularly suitable for repairing concrete structures where high ductility is required.

CONSUMPTION: 18 kg/m² per cm of thickness.
APPLICATION: trowel, gauging trowel or rendering machine.



Mapegrout BM



- ▶ Two-component low modulus cementitious mortar for repairing concrete.

CONSUMPTION: 21 kg/m² per cm of thickness.
APPLICATION: trowel, gauging trowel or rendering machine.



Mapegrout Easy Flow GF



- ▶ One-component shrinkage-compensated sulphate-resistant thixotropic mortar fibre-reinforced with inorganic fibres for repairing concrete structures where higher ductility is required.

CONSUMPTION: 18.5 kg/m² per cm of thickness.
APPLICATION: trowel, gauging trowel or rendering machine.



Mapegrout LM2K



- ▶ Two-component low modulus thixotropic fibre-reinforced cementitious mortar with added organic-based corrosion inhibitor applied in a single layer from 3 to 20 mm thick for repairing concrete.

CONSUMPTION: approx. 21 kg/m² per cm of thickness.
APPLICATION: trowel, gauging trowel or rendering machine.



Mapegrout 430



- ▶ Fine-textured normal-setting thixotropic fibre-reinforced mortar for repairing concrete.

CONSUMPTION: 17 kg/m² per cm of thickness.
APPLICATION: trowel, gauging trowel or rendering machine.

RAPID-SETTING THIXOTROPIC MORTARS



Characteristics	Mapegrout Fast-Set	Planitop 400	Mapegrout SV T	Planitop Smooth & Repair	Planitop Smooth & Repair R4
Class according to EN 1504-3	R3	R3	R4	R2	R4
Maximum size of aggregate	1 mm	0.5 mm	2.5 mm	0.4 mm	0.4 mm
Mixing ratio	15% - 16% water	15% - 16% water	12.5% - 13.5% water	17% - 19% water	16.5% - 17.5% water
Density of mix	2150 kg/m ³	2100 kg/m ³	2250 kg/m ³	1800 kg/m ³	2000 kg/m ³
Application temperature range	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C
Pot life of mix	approx. 10 mins.	approx. 10 mins.	approx. 10 mins.	approx. 15 mins. (*)	approx. 15 mins. (*)
Compressive strength	> 40 MPa after 28 days	> 35 MPa after 28 days	45 MPa after 28 days	≥ 18 MPa after 28 days	52 MPa after 28 days
Flexural strength	> 8 MPa after 28 days	> 7 MPa after 28 days	6 MPa after 28 days	≥ 4 MPa after 28 days	8 MPa after 28 days
Compressive modulus of elasticity	24 GPa after 28 days	24 GPa after 28 days	25 GPa after 28 days	13 GPa after 28 days	24 MPa after 28 days
Adhesion to concrete according to EN 1766	> 1.5 MPa after 28 days	> 1.5 MPa after 28 days	> 2 MPa after 28 days	≥ 1.5 MPa after 28 days	≥ 2 MPa after 28 days
Thermal compatibility to freeze/thaw cycles with de-icing salts measured as adhesion according to EN 1542	> 1.5 MPa	> 1.5 MPa	> 2 MPa	≥ 1.5 MPa	≥ 2 MPa
Maximum thickness per layer	20-25 mm	40 mm	50 mm	40 mm	40 mm
Consumption	18 kg/m ² per cm of thickness	18.5 kg/m ² per cm of thickness	20 kg/m ² per cm of thickness	approx. 15 kg/m ² per cm of thickness	approx. 17 kg/m ² per cm of thickness

(*) The workability time of the mortar can be extended by a further 15-20 mins. by adding one 0.25 kg canister of **Mapetard ES** (set-retarding admixture) per each 25 kg bag of **Planitop Smooth & Repair** or **Planitop Smooth & Repair R4**.



Mapegrout Fast-Set

► Shrinkage-compensated rapid-setting and hardening fibre-reinforced mortar for repairing concrete.
 CONSUMPTION: 18 kg/m² per cm of thickness.
 APPLICATION: smooth trowel, gauging trowel.



Mapegrout SV T

► Rapid-setting and hardening shrinkage-compensated thixotropic mortar for repairing concrete and anchoring drains, manholes and urban features and highway coating materials.
 COLOUR: available in black.
 CONSUMPTION: 20 kg/m² per cm of thickness.
 APPLICATION: smooth trowel, gauging trowel.



Planitop 400

► Rapid-setting shrinkage-compensated thixotropic mortar applied in a single layer from 1 to 40 mm thick for repairing the surface of concrete.
 CONSUMPTION: 18.5 kg/m² per cm of thickness.
 APPLICATION: smooth trowel, gauging trowel.



Planitop Smooth & Repair

► R2-class, rapid-setting shrinkage-compensated, thixotropic, fibre-reinforced, cementitious mortar applied in a single layer between 3 and 40 mm thick, for repairing and smoothing concrete.
 CONSUMPTION: approx. 15 kg/m² per cm of thickness.
 APPLICATION: smooth trowel, gauging trowel.



Planitop Smooth & Repair R4

► Structural R4-class, rapid-setting, shrinkage-compensated, thixotropic, fibre-reinforced, cementitious mortar, applied in a single layer between 3 and 40 mm thick, for repairing and smoothing concrete.
 CONSUMPTION: approx. 17 kg/m² per cm of thickness.
 APPLICATION: smooth trowel, gauging trowel.



NORMAL-SETTING FLOWABLE MORTARS



Characteristics	Mapegrout Hi-Flow	Mapegrout Hi-Flow GF	Mapegrout Hi-Flow TI 20
Class according to EN 1504-3	R4	R4	R4
Maximum size of aggregate	2.5 mm	2.5 mm	2.5 mm
Mixing ratio	13% - 14% water	14% - 16% water	14% - 16% water
Density of mix	2350 kg/m ³	2350 kg/m ³	2300 kg/m ³
Application temperature range	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C
Pot life of mix	approx. 1 hour	approx. 1 hour	approx. 1 hour
Compressive strength	> 75 MPa after 28 days	> 65 MPa after 28 days	> 70 MPa after 28 days
Flexural strength	12 MPa after 28 days	10 MPa after 28 days	> 16 MPa after 28 days
Compressive modulus of elasticity	27 GPa after 28 days	27 GPa after 28 days	27 GPa after 28 days
Adhesion to concrete according to EN 1766	> 2 MPa after 28 days	> 2 MPa after 28 days	> 2 MPa after 28 days
Thermal compatibility to freeze/thaw cycles with de-icing salts measured as adhesion according to EN 1542	> 2 MPa	> 2 MPa	> 2 MPa
Maximum thickness per layer	40 mm	50 mm	50 mm
Consumption	approx. 21 kg/m ² per cm of thickness	approx. 21 kg/m ² per cm of thickness	approx. 20 kg/m ² per cm of thickness



Mapegrout Hi-Flow



► Shrinkage-compensated fibre-reinforced mortar for repairing concrete.

CONSUMPTION: approx. 21 kg/m² per cm of thickness.

APPLICATION: pouring into formwork.



Mapegrout Hi-Flow GF



► Shrinkage-compensated flowable cementitious mortar fibre-reinforced with inorganic fibres for repairing concrete structures where higher ductility is required.

CONSUMPTION: approx. 21 kg/m² per cm of thickness.

APPLICATION: pouring into formwork.



Mapegrout Hi-Flow TI 20



► Shrinkage-compensated flowable high ductility cementitious mortar fibre-reinforced with stiff steel fibres for repairing concrete structures.

CONSUMPTION: approx. 20 kg/m² per cm of thickness.

APPLICATION: pouring into formwork.



RAPID-SETTING FLOWABLE MORTARS



Characteristics	Mapegrout SV	Mapegrout SV Fiber
Class according to EN 1504-3	R4	R4
Maximum size of aggregate	2.5 mm	2.5 mm
Mixing ratio	12% - 13% water	13.5% - 14.5% water
Density of mix	2300 kg/m ³	2350 kg/m ³
Application temperature range	from +5°C to +35°C	from -5°C to +35°C
Pot life of mix	from 15 mins. to 1 hour	approx. 20 mins.
Compressive strength	55 MPa after 28 days	70 MPa after 28 days
Flexural strength	9 MPa after 28 days	20 MPa after 28 days
Compressive modulus of elasticity	25 GPa after 28 days	29 GPa after 28 days
Adhesion to concrete according to EN 1766	> 2 MPa after 28 days	> 2 MPa after 28 days
Thermal compatibility to freeze/thaw cycles with de-icing salts measured as adhesion according to EN 1542	> 2 MPa	> 2 MPa
Maximum thickness per layer	50 mm	50 mm
Consumption	20 kg/m ² per cm of thickness	approx. 20 kg/m ² per cm of thickness



Mapegrout SV



- ▶ **Rapid-setting and hardening shrinkage-compensated flowable mortar for repairing concrete and anchoring drains, manholes and urban features and fittings.**

COLOUR: available in grey and black.

CONSUMPTION:

- used as is: 20 kg/m² per cm of thickness;
- mixed with 40% gravel: 14.5 kg/m² per cm of thickness (5.7 kg/m² of GRAVEL 6-10).

APPLICATION: pouring into formwork.



Mapegrout SV Fiber



- ▶ **Rapid-setting and hardening shrinkage-compensated flowable high-ductility cementitious mortar fibre-reinforced with stiff steel fibres for repairing concrete at temperatures down to -5°C.**

COLOUR: grey.

CONSUMPTION: approx. 20 kg/m² per cm of thickness.

APPLICATION: pouring into formwork.



NORMAL-SETTING HI-FLOW MICRO-CONCRETE

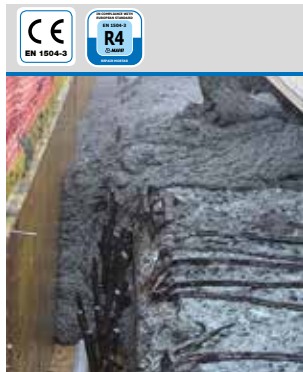


Characteristics	Mapefill MF 610	Mapegrout Betontech HPC	Mapegrout Betontech HPC10	Mapegrout Hi-Flow B2	Mapegrout GF Betoncino B1
Class according to EN 1504-3	R4	R4	R4	R4	R4
Maximum size of aggregate	10 mm	6 mm	10 mm	10 mm	10 mm
Mixing ratio	9.5% - 10.5% water	11.5% - 12.5% water	9.5% - 10% water	10% - 11% water	10.5% - 12% water
Density of mix	2,330 kg/m ³	2,300 kg/m ³	2,300 kg/m ³	2,300 kg/m ³	2,300 kg/m ³
Application temperature range	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C
Pot life of mix	approx. 1 h	approx. 1 h	approx. 1 h	approx. 1 h	approx. 1 h
Compressive strength	70 MPa after 28 days	> 75 MPa after 28 days	75 MPa after 28 days	70 MPa after 28 days	> 70 MPa after 28 days
Flexural strength	7 MPa after 28 days	-	-	7 MPa after 28 days	10 MPa after 28 days
Compressive modulus of elasticity	29 GPa after 28 days	30 MPa after 28 days	30 MPa after 28 days	28 MPa after 28 days	30 MPa after 28 days
Adhesion to concrete according to EN 1766	≥ 3 MPa after 28 days	> 2 MPa after 28 days	> 2 MPa after 28 days	> 2 MPa after 28 days	> 2 MPa after 28 days
Thermal compatibility to freeze/thaw cycles with de-icing salts measured as adhesion according to EN 1542	≥ 3 MPa	> 2 MPa	> 2 MPa	> 2 MPa	> 2 MPa
Consumption	approx. 21 kg/m ² per cm of thickness	approx. 20,5 kg/m ² per cm of thickness	approx. 21 kg/m ² per cm of thickness	approx. 21 kg/m ² per cm of thickness	approx. 21 kg/m ² per cm of thickness



Mapefill MF 610

► **Expansive mortar for precision anchoring in thick layers.**
 CONSUMPTION: approx. 21 kg/m² per cm of thickness.
 APPLICATION: pouring into formwork.



Mapegrout Betontech HPC

► **Free-flowing, shrinkage compensated cementitious grout, with added polymer fibre reinforcement, with a work-hardening effect, for restoring concrete requiring a high level of ductility.**
 CONSUMPTION: approx. 20.5 kg/m² per cm of thickness.
 APPLICATION: pouring into formwork.



Mapegrout Betontech HPC10

► **Free-flowing micro-concrete, with added polymer fibre reinforcement, with a work-hardening effect, for restoring concrete requiring a high level of ductility.**
 CONSUMPTION: approx. 21 kg/m² per cm of thickness.
 APPLICATION: pouring into formwork.



Mapegrout Hi-Flow B2

► **Shrinkage-compensated free-flowing fibre-reinforced micro-concrete for repairs to concrete structures.**
 CONSUMPTION: approx. 21 kg/m² per cm of thickness.
 APPLICATION: pouring into formwork.



Mapegrout GF Betoncino B1

► **Free-flowing, shrinkage-compensated cementitious mortar reinforced with inorganic fibres for repairing concrete structures where higher ductility is required. Class R4 EN 1504-3.**
 CONSUMPTION: approx. 21 kg/m² per cm of thickness.
 APPLICATION: pouring into formwork.



CEMENTITIOUS BINDERS



Characteristics	Stabilcem
Concrete mixed with Stabilcem:	water: 200 kg/m ³ Stabilcem: 400 kg/m ³ Gravel 0-15: 1≤717 kg/m ³
Density of mix	2330 kg/m ³
Consistency class (EN 12350-2)	S5
Expansion after 1 day (UNI 8148 - method A)	> 300 µm/m
Compressive strength (EN 12390-3)	52 MPa after 28 days
Flexural strength (EN 12390-5)	5.5 MPa after 28 days
Compressive modulus of elasticity (UNI 6556)	30 GPa
Adhesion to concrete (EN 1542)	> 2.5 MPa (failure of substrate)
Mortar mixed with Stabilcem:	water: 202.5 g Stabilcem: 450 g normalized sand: 1350 g
Consistency	fluid
Density of mix	2250 kg/m ³
Compressive strength	60 MPa after 28 days
Slurry made with Stabilcem:	water: 640 g Stabilcem: 2000 g
Flow-cone fluidity (EN 445) – start – after 30 minutes	13 seconds 20 seconds
Density of mix	2040 kg/m ³
Compressive strength (EN 12190)	75 MPa after 28 days
Flexural strength (EN 196-1)	8 MPa after 28 days
Expansion after 1 day (UNI 8147 – method A)	> 300 µm/m

Characteristics	Stabilcem SCC			
	515	550	600	655
Amount of Stabilcem SCC (kg/m ³)	515	550	600	655
Amount of aggregate (kg/m ³)	1615	1530	1470	1435
Amount of water (kg/m ³)	240	215	230	230
Density (kg/m ³)	2367	2298	2303	2318
Water/binder ratio	0.47	0.39	0.38	0.35
Slump flow (cm):	71	74	72	76
Compressive strength after 28 days (MPa)	49	53	55	57
Shrinkage according to UNI 6555 (mm)	435	445	440	468
Impermeability to water according to EN 206-1	no	yes	yes	yes

Stabilcem



► Expansive super-fluid cementitious binder for mixing injection slurry, mortar and concrete.

CONSUMPTION:

- injection slurry: approx. 1.5 kg/dm³ of cavities to be filled;
- mortar and cement: 350-550 kg/m³;
- concrete: 400 kg/m³.

Stabilcem SCC



► Cementitious binder for mixing self-compacting, volumetrically-stable cement and concrete for repairing concrete structures.

CONSUMPTION:

- cement: 600 kg/m³;
- concrete: 500-600 kg/m³.



MAPEI PRODUCTS FOR SMOOTHING CONCRETE

SMOOTHING THE SURFACE OF CONCRETE AND RENDER

Planitop 100: Rapid-setting light grey coloured fine mortar for repairing and smoothing concrete and render.

Classified EN 1504-2 coating (C) principles MC and IR.

Planitop 200: Water-repellent fine-textured cementitious smoothing mortar with a natural finish for concrete and plastic, glass and porcelain coverings.

Classified EN 1504-2 coating (C) principles MC and IR and EN 998-1 type GP mortar category CS IV.

Planitop 207: Water-repellent medium-textured cementitious smoothing mortar with a natural finish for concrete and plastic, glass and porcelain coverings.

Classified EN 1504-2 coating (C) principles MC and IR and EN 998-1 type GP mortar category CS IV.

Planitop 210: Water-repellent fine-textured cementitious smoothing mortar with a natural finish for concrete and plastic coverings.

Classified EN 1504-2 coating (C) principles MC and IR and EN 998-1 type GP mortar category CS IV.

Planitop 217: Water-repellent coarse-textured cementitious smoothing mortar with a natural finish for concrete and plastic coverings.

Classified EN 1504-2 coating (C) principles MC and IR and EN 998-1 type GP mortar category CS IV.

Planitop 530: Lime-cement fine-textured smoothing mortar with a natural finish for render and concrete.

Classified EN 1504-2 coating (C) principles MC and IR and EN 998-1 type GP mortar category CS IV.

Planitop 540: Water-repellent fine-textured cementitious smoothing mortar with a natural finish for render and concrete.

Classified EN 1504-2 coating (C) principles MC and IR and EN 998-1 type GP mortar category CS IV.

Planitop Fast 330: Rapid-setting fibre-reinforced cementitious mortar applied in layers from 3 to 30 mm thick to even out interior and exterior horizontal and vertical substrates.

Classified EN 1504-2 coating (C) principles MC and IR and EN 998-1 type GP mortar category CS IV.





Planitop Fine Finish: Ultra fine textured skimming mortar for concrete; recommended for exposed finish surfaces. Classified EN 1504-2 coating (C) principles MC and IR.

Planitop Smooth & Repair: Rapid-setting shrinkage-compensated thixotropic fibre-reinforced cementitious mortar class R2, to apply in a single layer from 3 to 40 mm thick for repairing and smoothing concrete.

Classified EN 1504-2 coating (C) principles MC and IR and class R2 EN 1504-3. Certified GEV-EMICODE EC1 R Plus with very low emission level of volatile organic compounds (VOC).

Planitop Smooth & Repair R4: Structural R4-class, rapid-setting, shrinkage-compensated, thixotropic, fibre-reinforced, cementitious mortar, applied in a single layer between 3 and 40 mm thick, for repairing and smoothing concrete.

Classified EN 1504-2 coating (C) principles MC and IR and class R4 EN 1504-3. Certified GEV-EMICODE EC1 R Plus with very low emission level of volatile organic compounds (VOC).

Monofinish: One-component normal-setting cementitious mortar for smoothing concrete.

Classified EN 1504-2 coating (C) principles MC and IR and class R2 EN 1504-3.

Mapefinish: Two-component cementitious mortar for finishing concrete.

Classified EN 1504-2 coating (C) principles MC and IR and class R2 EN 1504-3.

Mapelastic: Two-component cementitious mortar, flexible down of -20°C , for waterproofing balconies, terraces, bathrooms and swimming pools.

Classified EN 1504-2 coating (C) principles PI, MC and IR, and EN 14891.

Mapelastic Smart: Two-component high-flexibility (crack-bridging > 2 mm) cementitious mortar applied by trowel or roller for waterproofing such as balconies, terraces, bathrooms and swimming pools.

Classified EN 1504-2 coating (C) principles PI, MC and IR, and EN 14891.

Mapelastic Guard: Two-component flexible cementitious mortar for protecting large concrete structures subjected to high stress.

Classified EN 1504-2 coating (C) principles PI, MC and IR.

MAPEI PRODUCTS FOR SMOOTHING CONCRETE

		Planitop 100	Planitop 200	Planitop 207	Planitop 210	Planitop 217	Planitop 530	Planitop 540
Type	Normal-setting		•	•	•	•	•	•
	Rapid-setting	•						
Classification		EN 1504-2 Principles MC - IR	EN 1504-2 Principles MC - IR EN 998-1	EN 1504-2 Principles MC - IR EN 998-1	EN 1504-2 Principles MC - IR EN 998-1	EN 1504-2 Principles MC - IR EN 998-1	EN 1504-2 Principles MC - IR EN 998-1	EN 1504-2 Principles MC - IR EN 998-1
Application method	Trowel/gauging trowel	•	•	•	•	•	•	•
	Roller/brush							
Areas of use	Natural finish smoothing layer	•	•	•	•	•	•	•
	Flexible smoothing layer							
	Smoothing out surface defects	•	•	•	•	•	•	•
	Exposed finish smoothing layer							
	Localised repairs	•	•	•	•	•	•	•
	Resistant to abrasion							
	Protects against aggressive agents							
	Suitable for installing ceramics		•	•	•	•	•	•



Planitop Fast 330	Planitop Fine Finish	Monofinish	Mapefinish	Planitop Smooth & Repair	Planitop Smooth & Repair R4	Mapelastic	Mapelastic Smart	Mapelastic Guard
		•	•			•	•	•
•	•			•	•			
EN 1504-2 Principles MC - IR EN 998-1	EN 1504-2 Principles MC - IR	EN 1504-2 Principles MC - IR EN 1504-3 (R2)	EN 1504-2 Principles MC - IR EN 1504-3 (R2)	EN 1504-2 Principles MC - IR EN 1504-3 (R2) Emicode EC1 R Plus	EN 1504-2 Principles MC - IR EN 1504-3 (R4) Emicode EC1 R Plus	EN 1504-2 Principles PI - MC - IR EN 14891	EN 1504-2 Principles PI - MC - IR EN 14891	EN 1504-2 Principles PI - MC - IR
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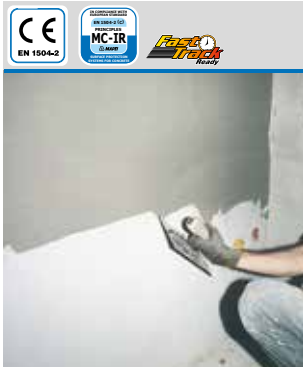


MORTARS FOR SMOOTHING CONCRETE



MORTARS FOR SMOOTHING CONCRETE													
Characteristics	Planitop 100	Planitop 200	Planitop 207	Planitop 210	Planitop 217	Planitop 530	Planitop 540	Planitop Fast 330	Planitop Fine Finish	Monofinish	Mapefinish	Planitop Smooth & Repair	Planitop Smooth & Repair R4
EN 1504-2 certification principles	MC and IR	MC and IR	MC and IR	MC and IR	MC and IR	MC and IR	MC and IR	MC and IR	MC and IR	MC and IR	MC and IR	MC and IR	MC and IR
Maximum size of aggregate	0.2 mm	0.4 mm	0.7 mm	0.4 mm	1 mm	0.4 mm	0.4 mm	1 mm	0.2 mm	0.4 mm	0.4 mm	0.4 mm	0.4 mm
Mixing ratio	26% - 27% water	20% - 23% water	17% - 19% water	21% - 24% water	19% - 22% water	24% - 27% water	24% - 26% water	18% - 20% water	40% - 42% water	18% - 19% water	Comp. B 4 : 1	17% - 19% water	16.5% - 17.5% water
Density of the mix	1650 kg/m ³	1600 kg/m ³	1800 kg/m ³	1740 kg/m ³	1650 kg/m ³	1600 kg/m ³	1600 kg/m ³	1750 kg/m ³	1600 kg/m ³	1700 kg/m ³	1800 kg/m ³	1800 kg/m ³	2000 kg/m ³
Application temperature range	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C	from +5°C to +35°C
Pot life of mix	20-30 mins.	approx. 1 hour 30 mins.	approx. 1 hour	approx. 1 hour	approx. 1 hour	approx. 1 hour	approx. 1 hour	approx. 20 mins.	approx. 45 mins.	approx. 1 hour	approx. 1 hour	approx. 15 mins. (*)	approx. 15 mins. (*)
Compressive strength	> 15 MPa after 28 days	> 20 MPa after 28 days	> 25 MPa after 28 days	> 16 MPa after 28 days	> 16 MPa after 28 days	> 6 MPa after 28 days	15 MPa after 28 days	> 20 MPa after 28 days	> 12 MPa after 28 days	> 25 MPa after 28 days	> 35 MPa after 28 days	≥ 18 MPa after 28 days	52 MPa after 28 days
Flexural strength	> 5 MPa after 28 days	> 5 MPa after 28 days	–	> 4 MPa after 28 days	> 4 MPa after 28 days	–	–	–	3.5 MPa after 28 days	> 6.5 MPa after 28 days	> 10 MPa after 28 days	≥ 4 MPa after 28 days	8 MPa after 28 days
Adhesion to concrete according to EN 1766	≥ 2 MPa after 28 days	≥ 2 MPa after 28 days	> 2 MPa after 28 days	≥ 1 MPa after 28 days	≥ 1 MPa after 28 days	> 1 MPa after 28 days	> 1 MPa after 28 days	≥ 2 MPa after 28 days	≥ 1 MPa after 28 days	≥ 2 MPa after 28 days	≥ 2 MPa after 28 days	≥ 1.5 MPa after 28 days	≥ 2 MPa after 28 days
Thermal compatibility to freeze/thaw cycles with de-icing salts measured as adhesion according to EN 1542	≥ 2 MPa	≥ 1 MPa	–	≥ 1 MPa	≥ 1 MPa	–	–	–	≥ 1 MPa	≥ 2 MPa	≥ 2 MPa	≥ 1.5 MPa	≥ 2 MPa
Thickness applied	from 1 to 3 mm	from 1 to 3 mm	from 1 to 3 mm	from 1 to 3 mm	from 1 to 3 mm	from 1 to 3 mm	from 1 to 3 mm	from 3 to 30 mm	up to 3 mm	from 1 to 3 mm	from 1 to 3 mm	from 3 to 40 mm	from 3 to 40 mm
Consumption	1.3 kg/m ² per mm of thickness	approx. 1.3 kg/m ² per mm of thickness	approx. 1.5 kg/m ² per mm of thickness	approx. 1.3 kg/m ² per mm of thickness	approx. 1.3 kg/m ² per mm of thickness	approx. 1.25 kg/m ² per mm of thickness	approx. 1.2 kg/m ² per mm of thickness	1.45 kg/m ² per mm of thickness	approx. 1.2 kg/m ² per mm of thickness	1.4 kg/m ² per mm of thickness	1.8 kg/m ² per mm of thickness	approx. 1.5 kg/m ² per mm of thickness	approx. 1.7 kg/m ² per mm of thickness

(*) The workability time of the mortar can be extended by a further 15-20 mins. by adding one 0.25 kg canister of **Mapetard ES** (set-retarding admixture) per each 25 kg bag of **Planitop Smooth & Repair** or **Planitop Smooth & Repair R4**.



Planitop 100

▶ **Rapid-setting light grey coloured fine mortar for repairing and smoothing concrete and render.**

CONSUMPTION: 1-1.3 kg/m² per mm of thickness depending on where it is applied.
APPLICATION: smooth trowel.



Planitop 200

▶ **Water-repellent fine-textured cementitious smoothing mortar with a natural finish for concrete and plastic, glass and porcelain coverings.**

COLOUR: grey or white.
CONSUMPTION: approx. 1.3 kg/m² per mm of thickness.
APPLICATION: smooth metal trowel.



Planitop 207

▶ **Water-repellent medium-textured cementitious smoothing mortar with a natural finish for concrete and plastic, glass and porcelain coverings.**

COLOUR: grey or white.
CONSUMPTION: approx. 1.5 kg/m² per mm of thickness.
APPLICATION: smooth metal trowel.



Planitop 210

▶ **Water-repellent fine-textured cementitious smoothing mortar with a natural finish for concrete and plastic coverings.**

COLOUR: grey or white.
CONSUMPTION: approx. 1.3 kg/m² per mm of thickness.
APPLICATION: smooth metal trowel.

MORTARS FOR WATERPROOF SMOOTHING LAYERS ON CONCRETE

Characteristics	Mapelastic	Mapelastic Smart	Mapelastic Guard
EN 1504-2 certification principles	PI, MC and IR	PI, MC and IR	PI, MC and IR
Mixing ratio	Comp. A : Comp. B = 3 : 1	Comp. A : Comp. B = 2 : 1	Comp. A : Comp. B = 3 : 1
Density of the mix	1700 kg/m ³	1600 kg/m ³	1700 kg/m ³
Density after application by spray	2200 kg/m ³	2200 kg/m ³	2200 kg/m ³
Application temperature range	from +8°C to +35°C	from +8°C to +40°C	from +5°C to +35°C
Pot life of mix	1 hour	1 hour	approx. 1 hour
Adhesion to concrete according to EN 1542	1 MPa	1.3 MPa	1 MPa
Thermal compatibility to freeze/thaw cycles with de-icing salts measured as adhesion according to EN 1542	0.8 MPa	0.9 MPa	0.8 MPa
Static crack-bridging capacity according to EN 1062-7 expressed as maximum width of crack	> 0.5 mm (-20°C)	> 2.5 mm (+20°C)	> 0.5 mm (-20°C)
Dynamic crack-bridging capacity according to EN 1062-7	No failure of test sample after 1000 cracking cycles with movements of crack from 0.1 to 0.3 mm (Mapelastic reinforced with Mapetex Sel at -20°C)	No failure of test sample after 20000 cracking cycles with movements of crack from 0.2 to 0.5 mm (+20°C)	-
Permeability to water vapour according to EN ISO 7783-1	S _D : 2.4 μ: 1200	S _D : 3.6 μ: 1800	S _D : 2.1 μ: 11600
Impermeability to water expressed as capillary absorption according to EN 1062-3 (kg/m ² ·h ^{0.5})	< 0.05	< 0.05	< 0.02
Permeability to carbon dioxide (CO ₂) according to EN 1062-6 – diffusion in an equivalent thickness of air S _D CO ₂ (m)	> 50	> 50	> 50
Consumption	Manual application: approx. 1.7 kg/m ² per mm of thickness By spray: approx. 2.2 kg/m ² per mm of thickness	Manual application: approx. 1.6 kg/m ² per mm of thickness By spray: approx. 2.2 kg/m ² per mm of thickness	Manual application: approx. 1.7 kg/m ² per mm of thickness By spray: approx. 2.2 kg/m ² per mm of thickness



Planitop 217

▶ **Water-repellent coarse-textured cementitious smoothing mortar with a natural finish for concrete and plastic coverings.**

COLOUR: grey or white.
 CONSUMPTION: approx. 1.3 kg/m² per mm of thickness.
 APPLICATION: smooth metal trowel.



Planitop 530

▶ **Lime-cement fine-textured smoothing mortar with a natural finish for render and concrete.**

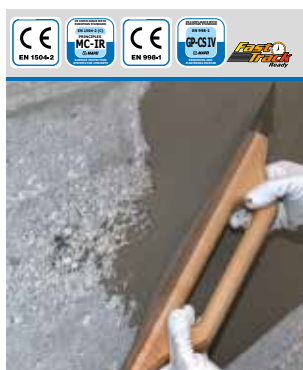
COLOUR: grey or white.
 CONSUMPTION: approx. 1.25 kg/m² per mm of thickness.
 APPLICATION: smooth metal trowel.



Planitop 540

▶ **Water-repellent fine-textured cementitious smoothing mortar with a natural finish for render and concrete.**

COLOUR: grey or white.
 CONSUMPTION: approx. 1.2 kg/m² per mm of thickness.
 APPLICATION: smooth metal trowel.



Planitop Fast 330

▶ **Rapid-setting fibre-reinforced cementitious mortar applied in layers from 3 to 30 mm thick to even out interior and exterior floors and walls.**

CONSUMPTION: approx. 1.45 kg/m² per mm of thickness.
 APPLICATION: smooth trowel.



Planitop Fine Finish

▶ **Ultra fine textured skimming mortar for concrete; recommended for exposed finish surface.**

COLOUR: light grey.
 CONSUMPTION: approx. 1.2 kg/m² per mm of thickness.
 APPLICATION: smooth metal, trowel or rubber.



Planitop Smooth & Repair

▶ **R2-class, rapid-setting shrinkage-compensated, thixotropic, fibre-reinforced, cementitious mortar applied in a single layer between 3 and 40 mm thick, for repairing and smoothing concrete.**

CONSUMPTION: approx. 15 kg/m² per cm of thickness.
 APPLICATION: smooth trowel, gauging trowel.



Planitop Rasa & Ripara R4

▶ **Structural R4-class, rapid-setting, shrinkage-compensated, thixotropic, fibre-reinforced, cementitious mortar, applied in a single layer from 3 to 40 mm thick, for repairing and smoothing concrete.**

CONSUMPTION: approx. 17 kg/m² per cm of thickness.
 APPLICATION: smooth trowel, gauging trowel.



Mapefinish

▶ **Two-component cementitious mortar for finishing concrete.**

CONSUMPTION: 1.8 kg/m² per mm of thickness.
 APPLICATION: smooth trowel.



Monofinish

▶ **One-component normal-setting cementitious mortar for smoothing concrete and cementitious render.**

CONSUMPTION: 1.4 kg/m² per mm of thickness.
 APPLICATION: smooth trowel.



Mapelastick Smart

▶ **Two-component high-flexibility (crack-bridging > 2 mm) cementitious mortar applied by trowel or roller for waterproofing, balconies, terraces, bathrooms and swimming pools.**

CONSUMPTION: approx. 1.6 kg/m² per mm of thickness (trowel or roller); approx. 2.2 kg/m² per mm of thickness (spray).

APPLICATION: roller, trowel or spray.
 N.B.: component B may be sold separately from component A.



Mapelastic



► **Two-component flexible cementitious mortar flexible down to -20°C for waterproofing balconies, terraces, bathrooms and swimming pools.**

CONSUMPTION: approx. 1.7 kg/m² per mm of thickness (trowel); approx. 2.2 kg/m² per mm of thickness (spray).

APPLICATION: smooth trowel or spray.

N.B.: component B may be sold separately from component A.



Mapelastic Guard



► **Two-component elastic cementitious mortar for protecting large concrete structures subjected to high stress.**

CONSUMPTION: approx. 1.7 kg/m² per mm of thickness (trowel); approx. 2.2 kg/m² per mm of thickness (spray).

APPLICATION: smooth trowel or spray.



● **Technical documentation**

From the technical area menu you can view the technical documentation divided per product lines and type of document.

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