



Mapecfloor EP19

Three-component epoxy mortar for wear-resistant floors



WHERE TO USE

Thick repair layers on concrete surfaces subjected to high abrasion and to form coatings with high wear resistance for concrete floors subjected to heavy traffic.

Some application examples

- Repair and levelling of reinforced concrete bearings for crane and bridge crane runways.
- Wear-resistant beds for machinery, beams, etc.
- Rebuilding the corners of expansion joints in industrial flooring damaged by impact from trucks and forklifts, etc.
- Filling gaps before installing anti-acid floors subjected to high abrasion in industrial environments.
- Protective wear-resistant layers on foundation pads for depuration plants and concrete drain pipes.
- Wear-resistant protection of reinforced concrete elements such as ramps, silo beds, and concrete floors subject to heavy traffic.

TECHNICAL CHARACTERISTICS

Mapecfloor EP19 is a three-component mortar manufactured from a formula developed in the MAPEI Research & Development laboratories. **Mapecfloor EP19** is composed of a fluid epoxy resin, a special hardener, and graded silica sand mineral filler that is ideal for preparing highly compact mortar.

Mapecfloor EP19 hardens without remarkable shrinkage to form a very strong product with particularly high resistance to wear and good resistance to aggressive chemical agents if saturated with **Mapeccoat I 24** or **Mapecfloor I 300 SL**.

At +23°C **Mapecfloor EP19** is set for light foot traffic 6 hours after application and ready for vehicle traffic after 12 hours. Final curing occurs after 7 days.

RECOMMENDATIONS

- Treat surfaces with **Primer SN** before applying **Mapecfloor EP19**.
- Apply **Mapecfloor EP19** on **Primer SN** while it is still fresh.
- Do not apply **Mapecfloor EP19** on substrates subject to strong capillary rising damp.
- Do not mix partial quantities of the components in order to prevent mistakes in the mix ratio that could interfere with the correct hardening of the product.
- Do not expose the product to heat sources after mixing.

HOW TO USE

Preparation of the substrate

- Before applying, make sure the substrate is properly cured, without cracks and with a solid surface.

TECHNICAL DATA (typical values)				
PRODUCT IDENTITY				
	component A	component B	component C	
Consistency:	viscose liquid	liquid	powder	
Colour:	straw yellow	straw yellow	sand	
Density (g/cm³):	1.17	1.07	-	
Dry solids content (%):	100	100	100	
Viscosity (mPa·s):	3500	400	-	
APPLICATION DATA (at +23°C and 50% R.H.)				
Mix ratio by weight A : B : C:	component A : component B : component C = 7.5 : 2.5 : 90			
Consistency of mix:	damp sand			
Density of mix (kg/m³):	1,900			
Application temperature range:	from +5°C to +30°C			
Workability at +23°C:	30-40'			
Set to light foot traffic:	6 hours			
Ready for use:	12 hours			
FINAL PERFORMANCES (at +23°C - 50% R.H.)				
Resistance to moisture:	excellent			
Resistance to temperature:	from -20°C to +120°C			
Resistance to ageing:	excellent			
Resistances to oils:	excellent			
Resistance to acids and alkalis:	excellent			
Compressive strength (EN 196/1) (N/mm²): - after 1 day: - after 7 days:	40 50			
Flexural strength (EN 196/1) (N/mm²): - after 1 day: - after 7 days:	17 20			
Adhesion to concrete (N/mm²):	> 2 (failure of the substrate)			
Abrasion resistance - Taber abrasion test (H22 disk - 1,000 g - 1,000 rev) expressed in weight loss (g): - after 1 day: - after 7 days:	2.2 1.1			
Modulus of elasticity under compression (UNI 6556) (N/mm²): - after 7 days:	19,500			
Performance characteristic	Test method	Requirements according to EN 13813 for synthetic resin screeds	Performance of product	Class
BCA wear resistance	EN 13892-4	< 100 µm	40 µm	AR0.5
Bond strength	EN 13892-8; 2004	> 1.5 N/mm ²	4.20 N/mm ²	B2.0
Impact strength	EN ISO 6272	> 4 Nm	20 Nm	IR20
Reaction to fire	EN 13501-1	from A _{fl} to F _{fl}	B _{fl} -s1	B _{fl} -s1
Emission of corrosive substances	-	Type	SR	SR
Permeability to water	EN 1062-3	-	NPD	NPD
Soundproofing capacity	EN ISO 140-6	-	NPD	NPD
Sound absorption	EN 12354-6	-	NPD	NPD
Thermal resistance	EN 12524 - EN 12664	-	NPD	NPD
Chemical resistance	EN 13529	-	NPD	NPD

- Remove cement laitance from the surface, along with any loose particles, oils or other materials that may interfere with bonding.
- Metal surfaces should be sanded down to white metal before applying the product.

Application of Primer SN

Just before applying **Mapefloor EP19**, impregnate the dry surface with **Primer SN** two-component epoxy primer, supplied in two pre-dosed containers.

Carefully blend component A and component B of **Primer SN** and then apply it with a trowel or roller.

Preparing Mapefloor EP19

Pour **Mapefloor EP19** component A and B into a bucket and mix for several minutes. Then add component C (the powdered component) while mixing on low speed until the mix is even and with a consistency similar to a mortar screed.

Applying the product

Trowel the **Mapefloor EP19** onto the *primer* while the latter is still fresh, then tamp it and float finish with a metal trowel.

Finishing coat

To reduce the porosity and the settling of dirt on the **Mapefloor EP19** surface, one of the two procedures may be followed:

- saturate the surface with several coats of **Mapecoat I 24**;
- apply a protective smoothing layer of **Mapefloor I 300 SL** mixed with 20% by weight of **Quartz 0.25**.

Cleaning

Tools and clothing must be cleaned with ethyl alcohol while the product is still fresh.

CONSUMPTION

Mapefloor EP19:
20 kg/m² per 1 cm of thickness.

Primer SN:

0.5-0.7 kg/m² according to the absorption of the substrate.

PACKAGING

Mapefloor EP19 is available in buckets containing 10 kg of the product in accurately pre-measured components (0.750 kg component A + 0.250 kg component B + 9 kg component C).

Primer SN is supplied in 20 kg kits (16 kg of component A + 4 kg of component B).

STORAGE

The product is stable for 2 years when stored in a cool, dry sheltered place at a temperature not less than +5°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

Mapefloor EP19 component A is irritant for the eyes and skin. Both component A and B may cause sensitization when in contact with the skin of those predisposed. **Mapefloor EP19** component B is corrosive and it may cause burns. Furthermore, it is hazardous if inhaled or swallowed. The product contains low molecular weight epoxy resins that may cause sensitization if cross-contamination occurs with other epoxy compounds. When applying the product it is recommended to wear protective gloves and goggles and to take the usual precautions for handling chemicals. In case of contact with the eyes or skin wash immediately with plenty of clean water and seek medical attention. We recommend working in well ventilated areas. In case of poor ventilation, we recommend wearing the mask with filters. 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.

Furthermore, **Mapefloor EP19** component A and B are dangerous for aquatic life. Do not dispose of them 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

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



**Mapefloor
EP19**



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