PRIMER SN

Two-component fillerized epoxy primer, in compliance with the Radon gas tightness standards





DESCRIPTION

Primer SN has been specifically formulated to carry out preliminary priming treatments on surfaces before applying epoxy and polyurethane resin systems from the **Mapefloor** range, self-levelling cementitious mortars from the **Ultratop/Ultratop Living** range and **Ultratop Loft**, to protect and coat concrete civil and industrial floors and cementitious substrates in general.

TECHNICAL CHARACTERISTICS

Primer SN is a high solid content, two-component, fillerized epoxy resin-based primer applied by roller or steel straight trowel or rake, according to a formula developed in the MAPEI R&D Laboratories.

The application of a layer of **Primer SN** prevents Radon (radioactive natural gas present in the soil) from penetrating inside the buildings. It is compliant with DIN ISO/TS 11665-13 standards (for thicknesses of 2 mm), verified and certified by the IAF accredited laboratory for radionuclide analysis.

Compliant with the requirements according to EN 13813 "*Screed material and floor screeds - Screed material - Properties and requirements*", which defines the requirements to be applied to materials for screeds used in the construction of interior floors.

Primer SN may be used as it is or mixed with **Quartz 0.5**, both to improve the adhesion of the following resin systems and/or even out the surfaces.

Thanks to its special formulation, **Primer SN** is characterised by a good wetting capacity and can also be applied on substrates which are locally moderately damp.

ADVANTAGES

- Easy application.
- Multipurpose.
- Excellent consolidating property.
- Applicable also on locally moderately damp substrates.
- Excellent pore sealing effect.
- High adhesion to the substrate.
- Compatible with all epoxy and polyurethane products in the **Mapefloor** range.
- Low VOC emission (CDPH standard)

- Sustainability: it can contribute to LEED credits. EPD (Environmental Product Declaration) compliant.

WHERE TO USE

- Adhesion promoter for epoxy and polyurethane resin systems in general.
- Adhesion promoter for self-levelling and/or multi-layered resin systems.
- Adhesion promoter for resin mortar screeds.
- Adhesion promoter for coatings from the **Ultratop**, **Ultratop Living** and **Ultratop Loft** ranges.
- Binder for resinous mortars to patch and repair holes, cracks, voids, surface unevenness etc.

RECOMMENDATIONS

- Do not apply **Primer SN** on substrates with rising damp in case of the subsequent application of an epoxy or polyurethane resin system.
- Do not dilute **Primer SN** with solvent or water.
- Do not apply **Primer SN** on dusty, crumbling or weak substrates.
- Do not apply **Primer SN** on substrates with oil or grease stains or stains in general.
- Do not apply **Primer SN** on substrates that have not been properly prepared.
- Do not mix partial quantities of the components to avoid mixing errors; the product may not harden correctly.
- Do not expose the mixed product to sources of heat.
- If rooms where the product is being used need to be warmed up do not use heaters that burn hydrocarbons, otherwise the carbon dioxide and water vapour given off into the air will affect the shine on the finish and ruin its appearance. Use electric heaters only.
- Protect the product from water for at least 24 hours after application.
- Do not apply the product directly on substrates with moisture content higher than 4% and/or with capillary rising damp.
- The temperature of the substrate must be at least 3°C higher than the dew-point temperature. The air relative humidity must be max. 80%.

APPLICATION PROCEDURE

Preparation of the substrate

The surface of concrete floors must be preferably dry or slightly damp, clean and sound and have no crumbling or detached portions. The substrate concrete must have a compressive strength of at least 25 N/mm² and a minimum tensile strength of 1.5 N/mm². The strength of the substrate must also be suitable for its final use and the types of loads to which it will be subjected.

The moisture content in the substrate must be maximum 4% and there must be no capillary rising damp.

The surface of the floor must be prepared with a suitable mechanical process (e.g., shot blasting or grinding with a diamond disk) to remove all traces of dirt, cement laitance and crumbling or detached portions, and to make the surface slightly rough and absorbent.

Any cracks, holes or surface irregularities must be repaired and smoothed with **Primer SN** fillerized with quartz sand or made thixotropic with **Additix PE**, or **Mapefloor JA** or **Mapefloor JA Fast** depending on the width and depth of defects and cracks. To repair highly deteriorated areas and joints, fill large hollows and to create or slightly modify the slope in confined areas, use **Mapefloor EP19**, pre-dosed epoxy mortar.

Before applying **Primer SN** remove all traces of dust from the surface with a vacuum cleaner.

Preparation of the product

Stir the component A thoroughly and add the content of the component B. Add **Mapecolor Paste** if required and/or 20% by weight of **Quartz 0.5** to make a fluid mortar for reprofiling scratches of rough surfaces (the amount of the quartz sand can vary up to 50% by weight depending on the temperatures and the roughness of the

substrate). Mix with a low-speed electric mixer to prevent entraining air (300-400 revs/min) for at least 2 minutes, in any case until a homogeneous mixture is achieved.

Pour the mixture into a clean container and briefly mix again.

To create epoxy mortars for filling cracks and irregularities and to carry out small and localized repairs on the surface of the substrate, it is possible to vary the quantity and size of the quartz sand added or make the product thixotropic with **Additix PE**, to be added in such quantity until the desired consistency.

Do not mix the product for too long to prevent entraining too much air.

Apply the mixture within the pot life indicated in the table (refers to a temperature of +20°C). Higher surrounding temperatures will reduce the pot life, while lower temperatures will increase it.

Application of Primer SN

Primer SN is applied neat by roller or by straight steel trowel or rake, scratching the surface, when mixed with **Quartz 0.5**. On the still wet surface of the product, broadcast with **Quartz 0.5**; the kind of broadcast depends on the following epoxy or polyurethane resin system to be applied. In case of the following application of **Ultratop** or **Ultratop Living** the broadcast must be done using 1.2 mm quartz sand.

Make sure there are no open pores in the surface of the substrate, otherwise air could escape from the substrate and form pinholes in the following resin system applied. This is particularly important when applying self-levelling resin or cementitious systems.

CLEANING TOOLS

Clean tools used to prepare and apply **Primer SN** immediately after use with ethanol. Once hardened, the product may only be removed mechanically.

CONSUMPTION

0.3-0.7 kg/m² per coat depending on the characteristics of the substrate such as roughness, absorbency, temperature, etc.

PACKAGING

5 kg kits: component A = 4 kg; component B = 1 kg.

20 kg kits: component A = 16 kg; component B = 4 kg.

STORAGE

24 months in its original sealed packaging, in a dry place at a temperature between +5°C and +30°C. Protect from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.com.

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.

PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	component A	component B
Colour	neutral	straw-yellow
Consistency	liquid	liquid
Density (EN ISO 2811-1)	1.65 g/cm³	0.99 g/cm³
Viscosity at +23°C (EN ISO 2555)	3 000 mPa·s (# 4 - 20 rpm)	200 mPa·s (# 1 - 20 rpm)

APPLICATION DATA (at +23°C and 50% R.H.)	
Mixing ratio by weight:	component A : component B = 80 : 20
Colour of mix	neutral
Consistency of mix	thick fluid
Density of mix (EN ISO 2811-1)	1 500 kg/m³
Viscosity of mix (EN ISO 2555)	1 100 ± 100 mPa·s (# 3 - 50 rpm)
Workability time at +20°C	30 mins.
Application temperature (refers to ambient, material and substrate):	from +8°C to +35°C
Waiting time between coats at +23°C and 50% R.H. – on Primer SN without broadcast of quartz sand: – on Primer SN with broadcast in excess of quartz sand:	 min. 12 hours, max. 48 hours min. 12 hours, no maximum limit* *surfaces must be dry, clean and with no dust
Hardening time at +23°C and 50% R.H.: – dust dry: – set to foot traffic: – full hardening time:	 approx. 6 hours approx. 24 hours approx. 7 days
The times above are for indication purposes only and are influenced by actual site conditions (e.g. temperature of the surroundings and substrate, relative humidity of the surrounding air, etc.)	

FINAL PERFORMANCE	
Compressive strength (EN 196-1)	63 N/mm² (7 days at +23°C)
Shore D hardness (DIN 53505)	78 (7 days at +23°C)

Essential characteristics	Test method	Requirements according to EN 13813 for synthetic resin-based screeds	Typical values
Bond strength	EN 13892-8	≥ B1.5	≥ B2.0
Reaction to fire	EN 13501-1	from $A1_{FL}$ to F_{FL}	B_{FL}-s1

Performance characteristic Radon gas	Test method	Performance of product
Determination of the Radon diffusion coefficient	DIN ISO/TS 11665-13	R > 3

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

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.

The most up-to-date TDS can be downloaded from our website www.mapei.com.

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

TECHNICAL SPECIFICATIONS

Supply and application of high solid content, two-component, fillerized epoxy resin-based primer, capable of preventing the penetration of Radon gas into the rooms in which it is applied (such as **Primer SN** by Mapei S.p.A.), to be applied as is by roller or to be mixed with 20% by weight of kiln-dried quartz sand with a grain size of up to 0.5 mm (such as **Quartz 0.5** by Mapei), to obtain a fluid resinous mortar to be applied as scratch coat by straight trowel or rake, suitable as a base layer for subsequent resin systems based on epoxy or polyurethane resin or cementitious coatings. On the still wet product layer, a broadcast of kiln-dried quartz sand will be carried out in quantity and grain size depending on the type of subsequent resin or cement system to be applied.

The hardened product must have the following characteristics:

Bond strength (EN 13892-8):	3.20 N/mm^2
Compressive strength (EN 196-1):	63 N/mm^2 (7 days at +23°C)
Shore D hardness (DIN 53505):	78 (7 days at +23°C)
Reaction to fire (EN 13501-1):	B_{FL}-s1
Determination of the Radon diffusion coefficient (DIN ISO/TS 11665-13) (for thicknesses of 2 mm):	R > 3

Low VOC emission (CDPH standard)

Contributes to obtaining LEED credits, EPD (Environmental Product Declaration) compliant

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