



Primer SN™



Two-Component, Filled, Epoxy Primer



DESCRIPTION

Primer SN is a two-component, filled, epoxy primer specifically designed to enhance adhesion of cement-based decorative and multilayer flooring, such as MAPEI's *Mapefloor™* products, *Ultratop®* products, *PlaniLevel™* products and *Planitop EL*.

FEATURES AND BENEFITS

- Enhances the bond of high-performance polyurethane and epoxy resin flooring systems
- Can be used as a primer for cement-based decorative toppings or self-leveling underlayments when the sand broadcast method is utilized
- Excellent adhesion to properly prepared concrete substrates
- Low in VOCs
- Easy-to-apply, low-viscosity formula
- Can be applied to damp surfaces

INDUSTRY STANDARDS AND APPROVALS

- Available for use in USDA-inspected facilities

WHERE TO USE

- For priming concrete substrates to enhance the bond of multilayer polyurethane and epoxy resin flooring systems
- For priming concrete substrates that will receive MAPEI's decorative toppings or self-leveling underlayment systems
- For parking decks, warehouse floors, laboratory spaces and wet/dry processing areas

Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

SURFACE PREPARATION

- All substrates must be structurally sound, stable, clean, and free of any bond-inhibiting or bond-breaking materials such as adhesives, tar, cure-and-seal compounds, curing compounds and mastics.
- Mechanically prepare the surface by engineer-approved methods to obtain an International Concrete Repair Institute (ICRI) concrete surface profile (CSP) of #3. Construction, expansion, control and isolation joints must be honored through the finished flooring system. To ensure product performance, repair all cracks greater than 1/32" (1 mm) in width and treat joints using engineer-approved methods.
- Concrete substrates should have a minimum tensile pull-off strength of 200 psi (1.38 MPa), and a minimum compressive strength of 3,000 psi (20.7 MPa) for pedestrian traffic and 4,000 psi (27.6 MPa) for vehicular traffic.

MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

1. Premix all of the Part A resin to a homogenous consistency (for up to 3 minutes) using a low-speed drill (at 300 to 450 rpm) and appropriate paint-mixing paddle to minimize trapped air.
2. Pour all of the Part B hardener into the Part A container and mix thoroughly to a smooth, homogenous consistency. Do not mix at high speeds, which can trap air within the mixed material.



3. During the mixing process, scrape down the sides and bottom of the container to completely mix all components.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Before application, confirm the substrate's moisture content, relative humidity (RH) and temperature in relation to the dew point. See the "Limitations" section below for details.
 2. Pour mixed *Primer SN* onto the substrate in a continuous, pore-free coat. If necessary for particularly porous surfaces, two priming coats may be applied. To smooth out rough surfaces, *Primer SN* may be mixed with quartz silica sand of 16/30 mesh at a rate of 2 parts of *Primer SN* per 1 part of sand.
 3. Spread *Primer SN* using a brush, roller or squeegee. The preferred application method is to use a squeegee and back-roll crosswise, ensuring that the minimum required thickness is maintained.
 4. Apply the entire contents of the mixed unit, working the material aggressively into the concrete substrate to cover the substrate entirely with a wet film thickness (WFT) needed for the appropriate MAPEI system. Use a quality paintbrush for the hard-to-reach areas.
 5. Use a paintbrush to apply *Primer SN* to the inside edges of construction, expansion, control and isolation joints to ensure that they receive a consistent film. Complete the joint treatment by placing backer rods and appropriate joint sealant before installing epoxy and polyurethane coatings.
 6. Alternatively, sand may be broadcast into *Primer SN* to increase mechanical bond. Contact MAPEI's Technical Services Department for the proper gradation size of aggregate and the application rate for the intended use. When *Primer SN* is tack-free (see the "Waiting time" data in the "Application Properties" table below), remove loose, excess aggregate by blowing, sweeping or vacuuming.
- Test the concrete substrate using appropriate methods for testing calcium chloride (ASTM F1869) and methods for testing surface moisture content (ASTM F2170) ensuring that it is below 5 lbs. per 1,000 sq. ft. (2.27 kg per 92.9 m²) or 85% RH.
 - Do not apply in areas when the RH is greater than 85%.
 - Do not mix partial quantities of Parts A and B.
 - Do not dilute *Primer SN* with solvents or water.
 - If outgassing is a concern on some substrates (which may lead to pinholing and bubbling in the *Primer SN* application), wait 16 to 48 hours after shotblasting (the preferred method of surface preparation) before applying *Primer SN*.
 - When utilizing *Primer SN* for MAPEI's *Ultratop*, a 100% refusal of 20/40 mesh sand must be broadcast into the applied primer. (See the Technical Data Sheet [TDS] for *Ultratop* for more information.)
 - When utilizing *Primer SN* for MAPEI's *Ultratop PC* or *Planitop EL*, a 100% refusal of 10/20 or #16 mesh sand must be broadcast into the applied primer. (See the TDS for *Ultratop PC* or *Planitop EL* for more information.)

CLEANUP

- Before *Primer SN* cures to a hardened state (see the "Curing time" data in the "Application Properties" table below), clean equipment using an appropriate solvent, such as xylene. Cured material can only be removed mechanically.

LIMITATIONS

- Use only between the ambient and substrate temperatures of 55°F and 95°F (13°C and 35°C).
- Do not use on exterior, on-grade surfaces.
- Ensure that *Primer SN* is protected from water and condensation for at least 24 hours after application.
- Ensure that the temperature of the concrete is at least 5 degrees Fahrenheit (2.8 degrees Celsius) above the dew point during the application and curing of *Primer SN*.

Product Performance Properties at 73°F (23°C) and 50% RH

Laboratory Tests	Results
Solids content	About 100%
VOCs (Rule #1168 of California's SCAQMD)	27 g per L
Viscosity	1,500 cps
Density	1.42 g per mL
Pull-off tensile strength (ASTM D4541) – 100% failure in concrete substrate	> 435 psi (3 MPa)
Mix ratio A:B (% mass)	80:20

Shelf Life and Product Characteristics before mixing

Shelf life	2 years in original, unopened containers at 73°F (23°C)
Storage conditions	Store at 41°F to 86°F (5°C to 30°C).
Chemistry	2-part epoxy
Consistency	Pourable liquid
Color	Part A: Neutral beige Part B: Light yellow

Protect from freezing. Do not ship or store unless protection from freezing is available.

Application Properties

Pot life, 8.8 U.S. oz. (250 g)	
55°F (13°C)	4 hours, 30 minutes
73°F (23°C)	1 hour, 15 minutes
95°F (35°C)	30 minutes
Waiting time (minimum) between coats	
55°F (13°C)	21 hours
73°F (23°C)	10 hours
95°F (35°C)	4 hours
Curing time	
55°F (13°C)	18 days*
73°F (23°C)	10 days
95°F (35°C)	4 days

* Product cures better at 55°F (13°C) than at 46°F (8°C). For lower temperatures, use Primer SN Fast.

Approximate Coverage** for substrate with CSP #3

Wet Film Thickness	Coverage
4 mils	401 sq. ft. per U.S. gal. (9.82 m ² per L)
6 mils	267 sq. ft. per U.S. gal. (6.54 m ² per L)
9 mils	178 sq. ft. per U.S. gal. (4.36 m ² per L)
12 mils	133 sq. ft. per U.S. gal. (3.26 m ² per L)
15 mils	107 sq. ft. per U.S. gal. (2.62 m ² per L)
20 mils	80 sq. ft. per U.S. gal. (1.96 m ² per L)

** Coverage varies depending on the desired build as well as the profile and porosity of the substrate.

Packaging

Size
Kit: 3 U.S. gals. (11.4 L): Part A, pail: 2.17 U.S. gals. (8.21 L) Part B, jug: 0.83 U.S. gal. (3.14 L)

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Refer to the SDS for specific data related to health and safety as well as product handling.

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA) or sustainability-durabilite@mapei.com (Canada).

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 nor replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at

www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use,

and the user alone assumes all risks and liability. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

We proudly support the following industry organizations:



MAPEI Headquarters of North America

1144 East Newport Center Drive
Deerfield Beach, Florida 33442
1-888-US-MAPEI (1-888-876-2734) /
(954) 246-8888

Technical Services

1-888-365-0614 (U.S. and Puerto Rico)
1-800-361-9309 (Canada)

Customer Service

1-800-42-MAPEI (1-800-426-2734)

Services in Mexico

0-1-800-MX-MAPEI (0-1-800-696-2734)

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For the most current product data and BEST-BACKED™ warranty information, visit www.mapei.com.

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