

# Primer CE

Ultra Low-Viscosity, Consolidating, Epoxy Primer



## DESCRIPTION

*Primer CE*<sup>™</sup> is an ultra low-viscosity, two-component, 100%-solids surface-consolidating, epoxy primer. *Primer CE* effectively penetrates and consolidates the surface of weak concrete or gypsum substrates. Applied in a single-coat application, *Primer CE* is designed to restore structural integrity to friable substrates such as weak gypsum-based underlayments or lightweight concretes before the application of underlayments, toppings or floor finishes. Once installed, *Primer CE* is compatible with a wide number of primers and adhesives typically used with flooring installations, such as with tile, vinyl composition tile (VCT), carpet, sheet vinyl, wood and other floor-finishing products.

## FEATURES AND BENEFITS

- Ultra low viscosity penetrates into the substrate, consolidating and tightly bonding surfaces to substrates.
- Low odor and VOC compliance for use in interior, occupied environments
- Extended working time allows epoxy to penetrate deeply into the substrate.
- Deep penetration into substrate provides strong, consolidating effect.
- Cost-effective solution to address weak substrates

## WHERE TO USE

- Sound, stable concrete substrates
- Sound, stable fully cured gypsum underlayments requiring surface consolidation
- Sound, stable fully cured lightweight concretes requiring surface consolidation

## LIMITATIONS

- Optimum installation temperatures (ambient and substrate) are 55°F to 85°F (13°C to 29°C). Precondition material to 70°F (21°C) for 24 hours before mixing and installation. It is important to precondition the material to ensure a viscosity that permits substrate penetration and effective consolidation. Extreme heat should also be avoided because it will reduce the epoxy's time for penetrating the substrate.
- Do not install over standing water.
- Verify that the substrate is free of bond-inhibiting or bond-breaking materials such as curing compounds, topical and penetrating sealers, oil, oil residue, dust and grease.
- Repair all cracks and treat joints correctly to ensure system performance.
- If used in exterior situations, perform a plastic sheet test (ASTM D4263) to ensure that no moisture vapor emissions are present.
- Do not use on slabs on grade subject to freezing.
- *Primer CE* will penetrate into open hairline cracks, capillaries and pores on the surface of concrete substrates. It will typically strengthen and consolidate the top 1/16" to 1/4" (1.5 to 6 mm), depending on the density of the concrete. *Primer CE* will have no consolidating or strengthening effect beyond the depth that it penetrates. *Primer CE* has been designed and formulated to provide a sound, stable surface ideal for subsequent bonding of self-leveling underlayments and toppings.

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

## SUITABLE SUBSTRATES

- Concrete substrates that have been mechanically prepared using dustless engineer-approved methods to an International Concrete Repair Institute (ICRI) concrete surface profile (CSP) of #2 to #3. Substrates with a profile greater than CSP #3 will realize lower coverage rates. The substrate profile should not exceed CSP #6.
- Sound, fully cured gypsum or lightweight substrates requiring surface consolidation before application of additional flooring systems
- Weak concrete substrates (capable of a direct tensile pull of 60 psi [0.41 MPa] or greater) that require consolidation, or concrete substrates with hairline cracks that require treatment

## SURFACE PREPARATION

- Do not use over substrates containing asbestos.
- All substrates must be structurally sound, dry, solid, stable and free of bond-inhibiting or bond-breaking materials such as curing compounds, topical and penetrating sealers, oil, oil residue, dust and grease.
- Mechanically prepare the surface to obtain a CSP of #2 to #3 by shotblasting. Ensure that all old adhesives, contaminants, etc., are completely removed.
- If outgassing is a concern (which may lead to pinholing in the primer surface), wait 16 to 24 hours after shotblasting before applying *Primer CE*.
- Mechanically prepare cracks, control joints and construction joints.
- Expansion and movement joints must be honored through the finished flooring system.
- Do not acid-etch surfaces before applying *Primer CE*.

## MIXING

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

1. Prepare to spread *Primer CE* on the substrate immediately after mixing.
2. Premix Part A to a homogenous consistency (for 1 to 2 minutes) using a low-speed mixer (at 300 to 450 rpm) and a Jiffy (paint mixer) mixing paddle.
3. Pour Part B into the Part A container and mix thoroughly (for 3 minutes) to a smooth, homogenous consistency. Do not mix at high speeds, which can entrap air within the mixed material.

## PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. After mixing, immediately spread the *Primer CE* on the substrate to maximize working time.
2. Spread using a 1/8" to 3/16" (3 to 4.5 mm) squeegee and back-roll with a caged roller with a short nap (1/4" to 3/8" [6 to 10 mm]). Roll material to achieve consistent film coverage across the surface and around the perimeter of any restrained surfaces.
3. Apply the entire contents of the mixed unit onto the substrate to cover the substrate entirely with a wet film thickness (WFT) of about 8 mils. Use a quality paintbrush for the hard-to-reach areas.
4. An absorbent, porous substrate will quickly draw the low-viscosity *Primer CE* below the surface.
5. Keep the surface covered with a wet film for 15 minutes, applying additional material where required to maintain a uniform wet, glossy film on the surface.
6. Allow to dry until tack-free (typically 5 to 6 hours at 73°F [23°C] up until 24 hours). Apply a MAPEI primer suitable for bonding to epoxy before installation of a self-leveling underlayment, or *Primer CE* using the sand-broadcast method before installing a self-leveling topping.
7. Floating or non-adhered floor systems can be installed directly over the cured *Primer CE* per the manufacturer's recommendations.
8. Appropriate adhesives may be bonded directly to *Primer CE*. Water-based adhesives require application of a cement-based self-leveler before use. Due to the wide variety of adhesives, always complete a mockup and test to ensure bond.
9. Within 48 hours, a second coat of *Primer CE* may be applied over the first application of *Primer CE*.
10. In cases where the desired finish is a decorative topping (such as *Ultraplan® M20 Plus* or *Ultratop®*), it is important to seed or broadcast sand into *Primer CE*. This can be achieved in two ways:
  - **One-coat system:** When using a one-coat system, it is very important to maintain a WFT of at least 8 mils on the surface of the substrate for at least 15 minutes (adding more material as required to maintain that film). A lack or loss of film on the surface will provide no resin with which to bond the sand. After maintaining the WFT of 8 mils for 15 minutes, seed the surface with 20 to 30 mesh, sorted, oven-dried sand (no fines). (Follow NIOSH guidelines when broadcasting with sand.) Wait 12 to 16 hours and remove excess sand by vacuum. If any areas are found that indicate a loss of film (so that no sand remains on the floor), apply a second coat of *Primer CE* and seed.
  - **Two-coat system:** After the first coat has hardened to a tack-free state (typically as early as 8 hours to a maximum of 48 hours), apply to a WFT of 6 to 8 mils and use the sand-broadcast method – using 20 to 30 mesh, sorted, oven-dried sand with no fines. Seed the second coat of *Primer CE* to rejection within 30 minutes of placement (following NIOSH guidelines when broadcasting with sand). Remove excess sand the following day by vacuum, and apply the *Ultraplan M20 Plus* or *Ultratop* according to the appropriate Technical Data Sheet.

## JOINT AND CRACK TREATMENT

Mechanically prepare control and construction/expansion joints with a diamond crack-chasing/concrete-cutting blade. Overcut the joint width to obtain a sound, clean edge. Use a dustless collection system to completely remove contaminants.

### Crack repair

Repair cracks with an appropriate epoxy before installation of *Primer CE*. Cracks narrower than 1/16" (1.5 mm) may typically be filled with *Primer CE* neat, typically as part of the *Primer CE* installation. Cracks beyond 1/16" (1.5 mm) in width will typically require an appropriate epoxy (*Primer CE* or *Planibond EBA*) mixed with sand. During crack repair, any epoxy that spills over onto the substrate must be fully seeded with sand.

### Control joint treatment

Control joints may typically be filled with *Primer CE* or an alternate epoxy. If control joints are prefilled with an epoxy other than *Primer CE*, any epoxy that spills over onto the substrate must be fully seeded with sand.

### Construction joints (joints subject to movement)

Do not fill construction joints or joints subject to movement with *Primer CE*. All such joints are to be respected and carried through any subsequent installation of self-leveling underlayment or topping, and filled with an appropriate joint sealant.

## CLEANUP

- Clean equipment before material cures. Cured material can only be removed mechanically.

### Product Performance Properties

Laboratory Tests	Results
Solids content	100%
VOC content (SCAQMD Rule 1113 )	< 100 g per L
Typical VOC content per SCAQMD Rule 1113 testing methods	46 g per L
Viscosity	190 to 230 cps
Density	65.6 lbs. per cu. ft. (1.05 g per cm <sup>3</sup> )
Flash point (Seta flash)	> 199°F (> 93°C)

### Shelf Life and Product Characteristics

before mixing

Shelf life	2 years. Store in cool dry place between 40°F to 95°F (4°C to 35°C).
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Consistency	Pourable liquid
Color	Part A, transparent yellow Part B, transparent amber

### Application Properties

at 73°F (23°C) and 50% relative humidity

Open time	90 minutes
Drying time	5 to 6 hours

### CSI Division Classifications

Concrete Topping	03 53 00
Cast Underlayment	03 54 00

### Packaging

Combined parts equal 3 U.S. gals. (11.4 L)

Size/color
Part A: 2.2 U.S. gals. (8.33 L)
Part B: 0.8 U.S. gal. (3.03 L)

### Approximate Coverage\*

Substrate Preparation	Recommended Application Tool	Coverage
Concrete subfloor with CSP #2 to #3	1/8" to 3/16" (3 to 4.5 mm) squeegee, followed by 1/4" to 3/8" (6 to 10 mm) nap roller	80 to 140 sq. ft. per U.S. gal. (1.96 to 3.43 m <sup>2</sup> per L)

\* Depending on the profile and porosity of the substrate

## ADDITIONAL INFORMATION

Refer to the Safety Data Sheet (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-durabilite@mapei.com](mailto:sustainability-durabilite@mapei.com).

## WARNING

The test results shown in the TECHNICAL DATA table were obtained in compliance with test methods and curing cycles, if applicable, defined in the industry standards referenced on the Technical Data Sheet. Please note that the use of test procedures or methods other than those indicated in the table could lead to different values and that, in such cases, any liability of our company is excluded.

### 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](http://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.**

## CONTACT INFORMATION

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### Customer Service

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

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For the most current product data and BEST-BACKED<sup>SM</sup> warranty information, visit [www.mapei.com](http://www.mapei.com).

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