

Planitop 11 SCC [NA]

Self-Consolidating Concrete Mix with Corrosion Inhibitor



NORTH AMERICA [NA]

FOR PROFESSIONAL USE ONLY

DESCRIPTION

Planitop® 11 SCC [NA] is a one-component, cementitious, self-consolidating concrete mix with silica fume and a corrosion inhibitor for full-depth structural concrete repairs in above-, below- and on-grade applications.

FEATURES AND BENEFITS

- Pre-extended with 5/16" (8 mm) aggregate
- Self-consolidating
- One-component
- Enhanced with a corrosion inhibitor and silica fume
- Can be installed from 1" (2.5 cm) to full depth
- Compatible with Mapeshield™ I galvanic anodes

WHERE TO USE

- Interior/exterior use
- For form-and-pour and form-and-pump applications
- For deep-fill structural repairs that contain congested reinforcing steel

Consult MAPEI's Technical Services Department for installation recommendations regarding uses not listed.

SURFACE PREPARATION

- The concrete surface must be sound, clean and free of loose particles, efflorescence, paints, tars, grease, asphaltic materials, bond breakers, curing compounds, wax, and any foreign substance or any conditions that might affect proper bonding of the product, resulting in possible cracking or discoloration, or affect its overall performance characteristics.
- Saw-cut the perimeter of the repair area into a square to a minimum depth of 1" (2.5 cm).
- Mechanically profile and prepare concrete surfaces by engineer-approved methods in accordance with the most current International Concrete Repair Institute (ICRI) 310.2R guidelines of Concrete Surface Profile (CSP) #9 to #10.
- Ensure that the concrete substrate is saturated surface-dry (SSD) before installation of *Planitop 11 SCC* [NA]. Alternatively, the prepared concrete can be coated with *Planibond*® 3C.
- Ensure that all exposed reinforcing steel is prepared in accordance with the most current ICRI 310.1 guideline and coated with either *Planibond 3C* or *Mapefer*™ 1K [NA].
- Pretreat formwork with a form-release agent.

MIXING

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

1. Clean, potable water in the amount of 0.76 U.S. gals. (2.89 L) is required per 66.1 lbs. (30 kg) of *Planitop 11 SCC* [NA], or 25.3 U.S. gals. (96.3 L) for a 2,205 lb. (1 000 kg) bag. Do not add more water than specified and never mix partial bags.
2. Use a rotary concrete drum mixer to mechanically mix the material. Pre-dampen the mixer and remove excess water before proceeding. Alternatively, a heavy-duty, low-speed drill (at 400 to 600 rpm) and an appropriate mixing paddle may be used.
3. Pour 3/4 of the required water into the mixing container. Slowly add *Planitop 11 SCC* [NA] while mixing. Add the remaining water as required and continue mixing.
4. Mix for about 3 minutes to obtain a smooth, homogeneous consistency.

PRODUCT APPLICATION

1. *Planitop 11 SCC* [NA] can be applied via form-and-pour or form-and-pump into formwork on horizontal, vertical and overhead surfaces.
2. The formwork should be rigid, sealed and tight to prevent material loss and water absorption into the formwork. Formwork should be pre-treated with an appropriate, environmentally friendly form-release agent to aid in form removal. Ensure that formwork has drainage outlets to remove pre-flooded water (24 hours before placement of *Planitop 11 SCC* [NA]) and leave the surface SSD.
3. After draining forms and immediately after mixing, pour or pump *Planitop 11 SCC* [NA] into the formed area. Reference ACI 304R, "Guide for Measuring, Mixing, Transporting and Placing Concrete."

CURING

1. Protect from high winds and direct sunlight while curing.
2. Moist-cure with wet burlap and polyethelene, with a fine mist of water, or with an appropriate ASTM C309-referenced curing compound.
3. For form-and-pour applications: Forms must remain in place for at least 72 hours. When forms are removed earlier, wet-cure or use an appropriate curing compound such as *Mapecure*[™] *UV WB* on the exposed repair area.

Note: Remove form-releasing agent and/or curing compound before covering the surface with a coating.

CLEANUP

Wash hands and tools promptly with water before the material hardens. Cured material must be mechanically removed.

LIMITATIONS

- Do not vibrate or consolidate *Planitop 11 SCC* [NA].
- Ensure that the repair area is at least 1" (2.5 cm) in depth before placement of *Planitop 11 SCC* [NA].
- Do not expose *Planitop 11 SCC* [NA] to rain or to standing or moving water during placement.
- Do not use additives with *Planitop 11 SCC* [NA].
- Do not mix partial bags of *Planitop 11 SCC* [NA].
- Do not use *Planitop 11 SCC* [NA] for anchoring purposes.
- Install *Planitop 11 SCC* [NA] between 45°F and 95°F (7°C and 35°C). Temperatures must be maintained within this range for at least 24 hours after the installation of *Planitop 11 SCC* [NA]. Refer to the American Concrete Institute (ACI) for cold-weather or hot-weather application guidelines.

Product Performance Properties

| Laboratory Tests | | Results |
|---------------------------------------------------------|--------------------------|---------|
| Spread rate (ASTM C1611) | | |
| Initial | 26" to 32" (66 to 81 cm) | |
| At 30 minutes | > 15" (38 cm) | |
| Compressive strength – ASTM C109 (CAN/CSA-A5) | | |
| 1 day | > 2,200 psi (15.2 MPa) | |
| 7 days | > 5,500 psi (37.9 MPa) | |
| 28 days | > 7,000 psi (48.3 MPa) | |
| Compressive strength – ASTM C39 | | |
| 28 days | > 6,500 psi (44.8 MPa) | |
| Flexural strength – ASTM C78 | | |
| 28 days | > 800 psi (5.51 MPa) | |
| Slant/shear bond strength – ASTM C882 (modified) | | |
| 28 days | > 2,500 psi (17.2 MPa) | |
| Length change – ASTM C157 (modified) | | |
| 28 days (air cure) | < 0.06% | |
| Splitting tensile strength – ASTM C496 | | |
| 7 days | > 400 psi (2.76 MPa) | |
| 28 days | > 500 psi (3.45 MPa) | |
| Freeze/thaw resistance – ASTM C666 | | |
| | > 98% at 300 cycles | |
| Rapid chloride permeability – ASTM C1202 | | |
| 28 days | < 1,000 coulombs | |
| Flexural strength – ASTM C348 | | |
| 28 days | > 1,000 psi (6.90 MPa) | |
| Scaling resistance – ASTM C672 | | |
| | Rating 2 at 50 cycles | |
| VOCs (Rule #1168 of California's SCAQMD) | | |
| | 0 g per L | |

Shelf Life and Product Characteristics

before mixing

| | |
|----------------|--------------------------------------------------------------------------------------|
| Shelf life | 1 year in original bag stored in a dry, heated, covered and well-ventilated location |
| Physical state | Powder |
| Color | Gray |

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

Application Properties

| Mixing ratio per 66.1 lbs. (30 kg) bag | Maximum 9.63% water by weight, or 0.76 U.S. gals. (2.89 L) |
|------------------------------------------|------------------------------------------------------------|
| Mixing ratio per 2,205 lb. (1 000 L) bag | Maximum 9.63% water by weight, or 25.3 U.S. gals. (96.3 L) |
| Consistency of mix | Flowable concrete mix |
| Application temperature range | 45°F to 95°F (7°C to 35°C) |

CSC Division Classification

| Maintenance of Concrete | 03 01 00 |
|-------------------------|----------|

Packaging

| Size |
|----------------------------------|
| Standard Bag: 66.1 lbs. (30 kg) |
| Large Bag: 2,205 lbs. (1 000 kg) |

Contact your MAPEI sales representative for details.

Approximate Coverage*

| Yield |
|---------------------------------------------------|
| Standard Bag: 0.5 cu. ft. (0.014 m ³) |
| Large Bag: 16.7 cu. ft. (0.467 m ³) |

* Coverage is for estimating purposes only. Actual jobsite coverage may vary according to substrate conditions, type of equipment, thickness applied and application methods used.

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.

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. **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.**

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

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