



Ultratop[®] PC

High-Performance, Polishable Concrete Topping



DESCRIPTION

Ultratop PC is a polishable, self-leveling, cementitious topping. *Ultratop PC* is engineered to provide a thin resurfacing material that is extremely dense, hard and durable.

FEATURES AND BENEFITS

- Easily installed from 3/8" to 2" (10 mm to 5 cm) neat and up to 5" (12.5 cm) extended
- Polishable in as soon as 24 hours
- Suitable for both new (28-day cured) and existing sound concrete
- Will accept light vehicular traffic in commercial, light industrial and residential applications
- *Ultratop PC* can be extended with decorative aggregate for unlimited finishes.

WHERE TO USE

- For interior use only; suitable for intermittent water exposure
- Suitable for light industrial floors, commercial, retail and residential applications

SURFACE PREPARATION

- Concrete surface must be clean and free of loose particles, efflorescence, paints, tars, grease, asphaltic materials, bond breakers, curing compounds, wax and any foreign substances.
- Mechanically profile and prepare concrete surfaces by engineer-approved methods in accordance with the most current ICRI 310.2R Guidelines.

- Always use caulking or foam tape to round off any sharp corners that protrude into the room receiving the topping, as well as column bases, supports and equipment pedestals, etc., including the use of foam tape around the perimeter of the pour.
- Always prime the prepared surface with MAPEI's *Primer SN™* or *Planibond® EBA* with a brush or roller before the application of *Ultratop PC* at a thickness of 15 to 20 wet mils. Follow immediately with a full sand broadcast (to rejection) with #16 to #30 mesh sand or #10 to #20 mesh sand. After the epoxy primer has cured for at least 16 hours, vacuum up the excess sand.
- All existing construction/control/expansion joints, or saw cuts, and all moving cracks must be properly repaired up through the topping by installing a flexible sealing compound for control/expansion joints, an epoxy adhesive for monolithic sealing of cracks in slabs or other materials specifically designed for use in joints or cracks. *Ultratop PC* must not be installed over any joints or any cracks if they are not properly repaired or prepared. If not, the control joint or any cracks will cause *Ultratop PC* to show cracks or pattern reflective after *Ultratop PC* has been installed. MAPEI cannot be responsible for problems that arise from existing cracks, new cracks or joints that may develop after *Ultratop PC* has been installed.

MIXING

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

General mixing

1. Into a clean mixing container, pour the required amount of cool, clean potable water.



2. Add *Ultratop PC* powder while slowly stirring. Mix water and *Ultratop PC* powder at a ratio of 0.9 to 1 U.S. gal. (3.41 L to 3.79 L) of water per 50-lb. (22.7-kg) bag of *Ultratop PC*.
3. The mixing ratio must remain consistent. Do not overwater the material.

Barrel mixing

1. Using the mixing ratio above, mix with a low-speed heavy-duty mixing drill (at about 650 rpm) with a mixing paddle.
2. Mix for approximately 2 to 2-1/2 minutes to obtain a lump-free mix.
3. Do not overmix. Overmixing or moving the mixer up and down during the mixing process could trap air, which could shorten the pot life or cause pinholing during the product application and curing.

Use of integral colors

- Integral colors may be used at the discretion of the owner/installer. However, extreme caution must be exercised to ensure that the type and amount of color does not alter and/or decrease the performance of *Ultratop PC*. A test pour should be conducted to ensure that performance characteristics – such as set time, flow, water ratio, ease of finishing and curing – are not significantly altered.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Before installation, close all doors and windows and turn off HVAC systems to prevent drafts. Protect areas from direct sunlight.
2. Make sure that the substrate and ambient room temperatures are between 50°F and 90°F (10°C and 32°C) before application. Temperatures must be maintained within this range for at least 72 hours after the installation of *Ultratop PC*. To ensure a successful installation, follow ACI cold-weather application guidelines in cool conditions, and follow ACI hot-weather application guidelines for temperatures above 85°F (29°C).
3. Set the width of the pour at a distance that is ideal for maintaining a continuous flow and wet edge throughout placement. Pour or pump *Ultratop PC* onto the properly prepared and primed concrete floor in a ribbon pattern.
4. *Ultratop PC* has a flow time of up to 10 minutes at 73°F (23°C) and 50% relative humidity, is semi-leveling and can be applied from 3/8" to 2" (10 mm to 5 cm) neat. Note that temperature and humidity will affect working time, flowability and setting time. Apply enough material to adequately cover all high spots.
5. Spread the material with a gauge rake. After achieving the desired depth, use a smoother to obtain a flat and uniform surface. To avoid air entrapment, do not overwork the material.
6. Use a gauge rake to blend material between pours. Stage work so that no more than 5 minutes elapse between subsequent pours into the wet edge.

7. For installations from 2" to 5" (5 to 12.5 cm), extend *Ultratop PC* up to 50% by weight, or up to 25 lbs. (11.3 kg) per 50-lb. (22.7-kg) bag with washed, well-graded pea gravel measuring 1/8" to 1/2" (3 to 12 mm). Mixing water needs to be adjusted to avoid segregation. Contact MAPEI's Technical Services Department for complete instructions when installing at greater thicknesses.
8. For polishing, let *Ultratop PC* cure for at least 24 hours. For optimum results, polish *Ultratop PC* between 48 to 72 hours after placement. A MAPEI densifier can be applied during the polishing process. Allow the densifier to penetrate *Ultratop PC*. Consult the densifier's Technical Data Sheet for application instructions.
9. Typically, *Ultratop PC* can be stained, sealed or coated 24 hours after application. Follow the recommendations of the stain, sealer or coating manufacturer. Test all surface treatments on a small sample area, before application, to ensure desired results. Verify that the moisture content meets the specifications of the stain, sealer or coating manufacturer.
10. Always perform a meaningfully sized mockup exactly as the finished floor will be.

CURING AND PROTECTION

- Avoid walking on the installed surface for at least 2 to 3 hours after installation, depending upon temperature and humidity conditions.
- Protect the application from traffic, dirt and dust from other trades until the final floor sealer or coating has been installed and completely cured.
- Do not expose *Ultratop PC* to rolling loads, such as forklifts or scissor lifts, for at least 48 hours after installation.

CLEANUP

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

LIMITATIONS

- Do not install in chemical environments requiring chemically resistant industrial toppings.
- Use *Ultratop PC* at a minimum thickness of 1/2" (12 mm) when light vehicular loads are expected.
- Use only between the temperatures of 50°F and 90°F (10°C and 32°C). In cooler conditions, follow cold-weather application guidelines from the American Concrete Institute, and for temperatures above 85°F (29°C), follow ACI hot-weather application guidelines to ensure a successful installation. Temperatures must be maintained within this range for at least 72 hours after the installation of *Ultratop PC*.
- High temperatures and low humidity conditions will decrease working time.
- Honor all expansion, isolation and control joints through the entire system.

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Product Performance Properties

Laboratory Tests	Results
Compressive strength – ASTM C109 (CAN/CSA-A5) at 73°F (23°C) and 50% relative humidity	
1 day	> 3,000 psi (20.7 MPa)
28 days	> 6,000 psi (41.4 MPa)
Flexural strength – ASTM C348 (CAN/CSA-A23.2-8C)	
28 days	> 700 psi (4.83 MPa)
VOCs (Rule #1168 of California's SCAQMD)	0 g per L

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.

Shelf Life and Product Characteristics before mixing

Shelf life	9 months in an unopened, original bag in a dry, covered and well-ventilated place at 73°F (23°C)
Physical state	Powder

Application Properties

Mixing ratio	0.9 to 1 U.S. gal. (3.41 L to 3.79 L) of water per 50-lb. (22.7-kg) bag of <i>Ultratop PC</i> powder
Density	About 131.1 lbs. per cu. ft. (2.10 kg per L)
Application temperature range	50°F to 90°F (10°C to 32°C)
Flowing time at 73°F (23°C)	10 minutes
Final set at 73°F (23°C)	< 80 minutes
Time required before installation of stains or coatings	24 hours

CSI Division Classifications

Concrete Topping	03 53 00
Cast-in-Place Concrete	03 30 00

Packaging

Size
Bag: 50 lbs. (22.7 kg)

Approximate Coverage* per 50 lbs. (22.7 kg)

Yield	0.44 cu. ft. (0.01 m ³)
Coverage at 3/8" (10 mm) thickness	14.1 sq. ft. (1.31 m ²)
Coverage at 1/2" (12 mm) thickness	10.6 sq. ft. (0.98 m ²)

* Coverage shown is for estimating purposes only. Actual jobsite coverage may vary according to substrate conditions and setting practices.

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- It is common for cementitious overlays to crack. Do not bridge unrepaired cracks or expansion, isolation and control joints.
- Indentations, gouging and similar damage can be caused by steel-wheeled and small-wheeled (high point-loading) as well as other hard-wheeled traffic, or by dragging sharp or heavy metal objects over the floor. *Ultratop PC* is not suitable for such excessive service conditions, heavy manufacturing, or chemical or industrial applications.
- The color of *Ultratop PC* may be subject to subtle smoothing marks or color differences caused by product dripping from placing and smoothing equipment. This is a normal aspect of colored materials and can be addressed with proper placement techniques.
- For concrete substrates with a moisture vapor emission rate (MVER) exceeding 5 lbs. per 1,000 sq. ft. (2.27 kg per 92.9 m²) per 24 hours, using a calcium chloride test (reference ASTM F1869), install an appropriate MAPEI moisture-reduction barrier system, followed by the application of *Primer SN* or *Planibond EBA* with sand broadcast within 24 hours.
- Note: The maximum allowable MVER is always determined by the complete system installed, including primers and sealers.
- A sizeable jobsite mockup is required before full application to ensure desired results.
- *Ultratop PC* is not warranted without the use of *Primer SN* or *Planibond EBA* and a properly graded sand broadcast.

- Alterations to the product – such as adding integral coloring, decorative aggregates stains and dyes – are not warranted.

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.**

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

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