Mapefloor Finish 415 NA

Two-Component, Polyurethane Topcoat for *Mapefloor* Parking Deck System

DESCRIPTION

Mapefloor™ *Finish 415 NA* is a two-component, solvent-free, aromatic polyurethane topcoat specifically designed to provide a protective wear coat for elevated concrete surfaces where the *Mapefloor* parking deck system is utilized.

FEATURES AND BENEFITS

- Highly attractive wear surface
- High resistance to wear and abrasion
- Chemical-resistant
- Low-odor and VOC-compliant for use in interior, occupied environments
- Easy to clean

WHERE TO USE

- Multi-story parking garages subjected to vehicular traffic
- Mechanical rooms
- Suspended pedestrian walkways, balconies and stadiums
- For waterproofing horizontal, interior/exterior, elevated concrete surfaces
- For when a specification calls for an aesthetically pleasing and skid-resistant surface

SUITABLE SUBSTRATES

- Properly prepared, elevated concrete substrates that have been mechanically prepared using engineer-approved methods to an International Concrete Repair Institute (ICRI) concrete surface profile (CSP) of #3 – primed with *Primer SN*™ or *Mapefloor PU Primer* and coated with *Mapefloor PU 400 FC* basecoat. If an intermediate coat is required, use *Mapefloor Finish 415 NA* as referenced in *Mapefloor* Installation Manual, which can be found in the Concrete Restoration Systems section of MAPEI's Website.

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

SURFACE PREPARATION

- *Mapefloor Finish 415 NA* must be applied over properly prepared, elevated concrete surfaces that have been primed with *Primer SN* or *Mapefloor PU Primer* and coated with *Mapefloor PU 400 FC* basecoat. For complete details on surface preparation, refer to *Mapefloor* Installation Manual.

MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details. For complete details on mixing, refer to *Mapefloor* Installation Manual.

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

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation. For complete installation, maintenance and applicable systems, consult the *Mapefloor* Installation Manual.

1. Allow *Mapefloor PU 400 FC* to cure for at least 3 hours at 75°F (24°C) or until tack-free. Then pour the mixed *Mapefloor Finish 415 NA* onto the previous layer of *Mapefloor PU 400 FC*.
2. Spread *Mapefloor Finish 415 NA* evenly and uniformly with a 1/4" (6 mm) notched squeegee. For the "Standard Pedestrian Traffic" System, spread the topcoat at a depth of 12 mils of wet film thickness (WFT) or at a rate of 134 sq. ft. per U.S. gal. (3.29 m^2 per L). For the "Heavy Pedestrian / Light Vehicular" System, spread the topcoat at a depth of 15 mils WFT or a rate of 106 sq. ft. per U.S. gal. (2.60 m^2 per L). Back-roll to achieve the desired thickness. Apply *Mapefloor Finish 415 NA* within 24 hours of application of *Mapefloor PU 400 FC*.
3. Immediately broadcast silica quartz sand aggregate of 16 to 30 mesh size – evenly distributed – into the wet coating at a rate of 10 to 15 lbs. per 100 sq. ft. (0.49 to 0.73 kg per m^2), and back-roll. Allow 5 to 6 hours for curing.
4. For heavy-duty areas such as spiraled ramps, turn areas and ticket booths of parking garages, apply two coats of *Mapefloor Finish 415 NA*. Allow at least 5 to 6 hours of curing for each coat. Spread each layer at a depth of 12 mils WFT or a rate of 134 sq. ft. per U.S. gal. (3.28 m^2 per L). Broadcast mesh silica quartz sand of 16 to 30 mesh size into each layer at a rate of 10 to 15 lbs. per 100 sq. ft. (0.49 to 0.73 kg per m^2) and back-roll.

CLEANUP

- Before the material hardens, clean tools with an appropriate solvent or cleaning material, such as xylene.

PROTECTION

- Protect *Mapefloor Finish 415 NA* from traffic and precipitation. At a temperature of 75°F (24°C), a *Mapefloor* parking deck system will allow light foot traffic after 16 hours. Vehicular traffic is allowed on coated surfaces after at least 48 to 72 hours. Lower temperatures will increase the cure time and lengthen the time before pedestrian and vehicular traffic is allowed.

LIMITATIONS

- Do not mix at high speeds, which can trap air within the mixed material.
- Do not apply onto unvented pan decks.
- Do not apply onto topping slabs that have waterproofing installed underneath on the structural slab.
- Do not apply onto slab-on-grade concrete surfaces.
- Do not install if rain is expected within 12 hours of placement.
- If *Mapefloor PU 400 FC* has exceeded its 24-hour open time, do not install *Mapefloor Finish 415 NA*.
- Do not apply *Mapefloor Finish 415 NA* on surfaces that are damp, wet or covered with frost.
- Do not dilute *Mapefloor Finish 415 NA* with water or solvents.
- Do not mix partial quantities of the components of *Mapefloor Finish 415 NA*.
- Before and during application, the ambient temperature range must be 45°F to 85°F (7°C to 29°C). Special precautions should be taken when ambient and substrate temperatures exceed 85°F (29°C). The substrate temperature must be at least 5 degrees F (2.8 degrees C) above the dew point and maintained at this level during curing.
- *Mapefloor Finish 415 NA* is part of the *Mapefloor* parking deck system and must not be used as a standalone product.

Product Performance Properties*

Laboratory Tests	Results
Weight of product – ASTM D1475	11.2 to 11.4 lbs. per U.S. gal. (5.08 to 5.17 kg per 3.79 L)
Solids content – ASTM C1250	100%
VOCs (Rule #1113 of California's SCAQMD)	50 g per L
Viscosity – ASTM D2196	1,000 to 2,200 cps
Tensile strength – ASTM D412	2,000 to 2,400 psi (13.8 to 16.6 MPa)
Elongation – ASTM D412	70% to 90%
Tear resistance – ASTM D1004	350 to 450 pli (6.13 to 7.88 x 10^4 N/m)
Water resistance – ASTM D471	1% at 7 days
Shore "A" hardness – ASTM D2240	55 to 75
Adhesion – ASTM D4541	300 psi (2.07 MPa)

Low-temperature crack bridging at -15°F (-26°C) – ASTM C1305-8, mod. 5.5	No cracking in the membrane
Adhesion in peel after water submersion, min. N – ASTM C794, mod. 5.6	> 22.2 N
Chemical resistance, tensile retention – ASTM D471, mod 5.7	
Water exposure	> 70%
Ethylene glycol exposure	> 70%
Mineral spirits exposure	> 45%
Abrasion resistance, max. mg – ASTM C501, mod. 5.9	< 50 mg
Stability, min. month – ASTM C957, mod. 5.10	> 6 months

** Results are typical values. Individual batches may vary up to 10% from the typical value.*

Shelf Life and Application Properties

Shelf life	1 year when stored in original, unopened packaging at 70°F (21°C)
Colors	Light Gray, Red, Tan, Black, Charcoal, Concrete Gray, Dark Maple, Green, Medium Gray
Open time at 77°F (25°C)	30 to 40 minutes
Curing time at 75°F (24°C) and 50% relative humidity – TT-S-00230A	5 to 6 hours

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.

CSI Division Classification

Dampproofing and Waterproofing 07 10 00

Packaging

Part A: 3.75 U.S. gals. (14.2 L)
Part B: 1.25 U.S. gals. (4.73 L)

ADDITIONAL INFORMATION

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).

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.

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