



MAPECRETE HARD FS
Liquid, Magnesium Fluorosilicate Densifier and Dustproof for Concrete

SECTION 03 35 00
Concrete Finishing

PART 1 GENERAL

1.1 SUMMARY

- A. Products for densifying and dust-proofing concrete.

1.2 RELATED SECTIONS

- A. Section 03 30 00 – Cast-in-Place concrete
- B. Section 03 40 00 – Pre-cast concrete

1.3 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Submit manufacturer's data sheets and safety data sheets (SDS) on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Samples: Submit samples of specified traffic deck system. Samples shall be construed as examples of finished color and texture of the system only.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years' experience manufacturing similar products.
- B. Applicator Qualifications: Minimum 2 years' experience installing similar products.
- C. Field Sample:
 - 1. Install a sizeable field sample at the discretion of the Engineer of Record.
 - 2. Apply material in accordance with manufacturer's written application instructions.
 - 3. Field sample will be standard for judging color and texture on remainder of project.
 - 4. Maintain field sample during construction for workmanship comparison.
 - 5. Do not alter, move or destroy field sample until work is completed and approved by owner's representative.
- D. Requirement of Regulatory Agencies: Comply with applicable codes, regulations, ordinances and laws regarding use and application of coating systems.

1.5 PRE-INSTALLATION MEETINGS

- A. Convene at least two weeks prior to starting work of this section.

1.6 DELIVERY, STORAGE AND HANDLING



- A. Deliver: Materials shall be delivered in original sealed containers, clearly marked with supplier's name, brand name, type of material and legible lot number.
- B. Storage and Handling: Recommended material storage temperature is 75°F (23°C).
Handle products to prevent damage to container. All materials shall be stored in compliance with fire and safety requirements. Do not store at high temperatures or in direct sunlight.

1.7 PROJECT CONDITIONS

- A. Prior to starting work, read and follow the Safety Data Sheet (SDS) and container labels for detailed health and safety information.
- B. Do not proceed with application of material when surface temperature is less than 40°F (4°C), if precipitation is imminent, or when a damp, unclean or frosty surface. Ambient temperature should be a minimum 40°F (4°C) and rising, and more than 5 degrees Fahrenheit (2.8 degrees Celsius) above dew point. Special precautions are to be taken when ambient and/or surface temperature are approaching, at, or above 100°F (38°C) and it may be necessary to limit material application to evening hours for exterior exposed decks.
- C. Coordinate waterproofing work with other trades. Applicator shall have sole right of access to the specified area for the time needed to complete the application and allow the vehicular traffic coatings to cure adequately.
- D. Protect plants or other surfaces not to be coated against damage or soiling.
- E. Keep products away from spark or flame. Do not allow the use of spark-producing equipment during application and until all vapors have dissipated. Post "No Smoking" signs.
- F. Maintain work area in a neat and orderly condition, removing empty containers, rags and rubbish daily from the site.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Product Performance:

Chemical resistance	To caustic soda, sodium chloride, soap solutions, calcium chloride, solvents, fuel oils, ammonium chloride and sugar solutions
Physical state	Clear, thin liquid
VOCs (Rule #1113 of California's SCAQMD)	0 g per L

B. Acceptable Manufacturer:

MAPEI North America
1144 E. Newport Center Dr.; Deerfield Beach, FL 33442
Toll-Free for CRS Technical Services: Tel. 888-365-0614
Email: CRS@mapei.com
Web: www.mapei.com

C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

D. Substitutions: Not permitted.



2.2 DENSIFIERS AND DUST-PROOFERS

A. A clear, water-based, magnesium-fluorosilicate solution for horizontal concrete surfaces that chemically bonds with the free lime in concrete, to produce a denser, more durable and chemically resistant floor surface.

1. Product: Subject to compliance with requirements, provide MAPEI Corporation; Mapecrete Hard FS.

2.3 MIXES

A. Comply with manufacturer's instructions for mixing procedures.

PART 3 EXECUTION

3.1 EXAMINATION

A. New, cured of at least 7 days old and existing concrete surfaces.

3.2 PREPARATION

- A. Concrete surface must be free of loose particles, efflorescence, paints, tars, grease, asphaltic materials, bond breakers, curing compounds, wax and any other contaminants before application.
- B. Allow the concrete to air-dry at least 24 hours after cleaning.

3.3 MIXING

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

A. Mapecrete Hard FS is easily diluted with water and mild agitation. See dilution ratio in the "Approximate Coverage" chart on the technical data sheet

3.4 INSTALLATION

Read all installation instructions thoroughly before installation.

- A. Pre-dampen concrete in hot weather when ambient temperatures are greater than 80°F (26°C). Apply Mapecrete Hard FS after all standing water has dissipated.
- B. Flood each coat of Mapecrete Hard FS onto the concrete surface and spread with a soft-fiber broom or with amop, squeegee, roller or sprayer.
- C. Allow the solution to soak into the substrate for 10 to 15 minutes, redistribute any remaining puddles and mop up any excess.
- D. Allow Mapecrete Hard FS to dry between coats – generally 4 to 12 hours, depending on temperature and humidity. Two coats are typically required for nonporous floors, but if the floor has severe dusting or carbonation, a third coat might be required.
- E. Any areas showing patches of white on the floor should be immediately flooded with hot water and scrubbed.

END OF SECTION