

SECTION 09 05 16
SUBSURFACE PREPARATION FOR FLOOR FINISHES

PART 1 - GENERAL**1.1 DESCRIPTION**

This section specifies subsurface preparation requirements for areas to receive the installation of applied and resinous flooring. This section includes removal of existing floor coverings, floor leveling and repair required.

1.2 RELATED WORK

- A. Color and pattern to comply with Interior Design Finish Guide.
- B. Resilient Base: Section 09 65 13, RESILIENT BASE AND ACCESSORIES.
- C. Resilient Tile Flooring: Section 09 65 19, RESILIENT TILE FLOORING.

1.3 SUBMITTALS

- A. Written approval confirming product compatibility with subfloor material manufacturer and the flooring manufacturer
- B. Product Data:
 - 1. Cementitious Self-Leveling Underlayment

1.4 DELIVERY AND STORAGE

- A. Deliver materials in containers with labels legible and intact and grade-seals unbroken.
- B. Store material to prevent damage or contamination.

1.5 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced in text by basic designation only.
- B. American Society for Testing and Materials (ASTM):

D4259-88 (2012)	Standard Practice for Abrading Concrete to alter the surface profile of the concrete and to remove foreign materials and weak surface laitance.
F710-11 (2011)	Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring

PART 2 - PRODUCTS

2.1 CEMENTITIOUS SELF-LEVELING UNDERLAYMENT

A. System Descriptions:

1. High performance self-leveling underlayment resurfacer. Single component, self-leveling, cementitious material designed for easy application as an underlayment for all types of flooring materials. It is used for substrate repair and leveling.

B. Products: Subject to compliance with applicable fire, health, environmental, and safety requirements for storage, handling, installation, and clean up. Gypsum-based products are unacceptable.

C. System Characteristics:

1. Wearing Surface: smooth
2. Thickness: Ranging from feathered edge to 1", per application. Applications greater than 1" require additional 3/8" aggregate to mix or as recommended by manufacturer.

D. Underlayment shall be calcium aluminate cement-based, containing Portland cement. Gypsum-based products are unacceptable.

E. Compressive Strength: Minimum 4100 psi in 28 days in accordance with ASTM C109/C109M.

F. Flexural Strength: Minimum 1000 psi in 28 days in accordance ASTM C348

G. Dry Time: Underlayment shall receive the application of //moisture insensitive tile in 6 hours, floor coverings in 16 hours, and resinous flooring in 3-7 days.

H. Primer: compatible and as recommended by manufacturer for use over intended substrate

I. System Components: Manufacturer's standard components which are compatible with each other and as follows:

1. Primer:

- a. Resin: copolymer
- b. Formulation Description: single component ready to use.
- c. Application Method: Squeegee and medium nap roller.
All puddles shall be removed, and material shall be allowed to dry, 1-2 hours at 70F/21C.
- d. Number of Coats: (1) one.

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Property	Test	Value
Compressive Strength	ASTM C109/C109M	2,200 psi @ 24 hrs 3,000 psi @ 7 days
Initial set time Final Set time	ASTM C191	30-45 min. 1 to 1.5 hours
Bond Strength	ASTM D7234	100% bond to concrete failure

PART 3 - EXECUTION**3.1 ENVIRONMENTAL REQUIREMENTS**

- A. Maintain ambient temperature of work areas at not less than (60 degrees F) for not less than 24 hours before testing and not less than three days after testing.
- B. Maintain higher temperatures for a longer period of time where required by manufacturer's recommendation.
- C. Do not install materials when the temperatures of the substrate or materials are not within 60-85 degrees F.

3.2 SURFACE PREPARATION

- A. Existing concrete slabs with existing floor coverings:
 - 1. Conduct visual observation of existing floor covering for adhesion, water damage, alkaline deposits, and other defects.
 - 2. Remove existing floor covering and adhesives. Comply with local, state and federal regulations and the RFCI Recommended Work Practices for Removal of Resilient Floor Coverings.
- B. Concrete shall meet the requirements of ASTM F710 and be sound, solid, clean, and free of all oil, grease, dirt, curing compounds, and any substance that might act as a bond-breaker before application. As required prepare slab by mechanical methods. No chemicals or solvents shall be used.
- C. General: Prepare and clean substrates according to flooring manufacturer's written instructions for substrate indicated.
- D. Prepare concrete substrates per ASTM D4259 as follows:
 - 1. Dry abrasive blasting.
 - 2. Vacuum-assisted abrasive blasting.
 - 3. Comply with manufacturer's written instructions.

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- E. Repair damaged and deteriorated concrete according to flooring manufacturer's written recommendations.
- F. Verify that concrete substrates are dry.
- G. Tolerances: Subsurface shall meet the flatness and levelness tolerance specified on drawings or recommended by the floor finish manufacturer. Tolerance shall also not to exceed 1/4" deviation in 10'.

3.3 CEMENTITIOUS UNDERLAYMENT:

- A. Install cementitious self-leveling underlayment as required to correct surface defects, address non-moving cracks or joints, provide a smooth surface for the installation of floor covering.
- B. Mix and apply in accordance with manufacturer's instructions.

3.4 FIELD QUALITY CONTROL

- A. Where specified, field sampling of products shall be conducted by a qualified, independent testing facility.

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