



Material Performance Specification Five Star® Clarifier Resurfacer

- A. Non-shrink, sulfate resistant, cement-based, pre-packaged overlay material capable of resurfacing concrete structures in aqueous environments requiring only the addition of potable water. The material shall not contain expansive cement, or gas generating additives such as aluminum powder.
- B. The manufacturer shall be ISO 9001 certified and have a minimum of 25 years of experience in the manufacture of non-shrink cementitious materials.
- C. The material manufacturer shall provide an experienced technical representative to be present during a pre-placement meeting and during the initial mixing and placement of the overlay materials with sufficient notice (5 working days).
- D. The material shall meet the following typical performance criteria when cured at 70° F (21° C)¹:
 1. Compressive strength per ASTM C109 shall be
 - 2,500 psi (17.3 MPa) at 1 day.
 - 5,000 psi (35.3 MPa) at 7 days.
 - 7,000 psi (48.3 MPa) at 28 days.
 2. Bond strength per ASTM C882 at 28 days shall be 2,000 psi (13.8 MPa).
 3. Sulfate resistance, wet expansion per ASTM C1012, 1x1x1 11 inch bars cured per ASTM C157 immersed in 5% sodium sulfate solution for one year shall have a maximum expansion of 0.1% per ASTM C1157.
 4. Freeze thaw resistance per ASTM C666 (Procedure A) at 300 cycles shall be greater than or equal to 90% RDM.
 5. Working time shall be a minimum of 45 minutes.
 6. Material shall be capable of being installed neat at depths from 1 to 2 inches (25 - 50 mm).
 7. Material shall be capable of being installed at a temperature range from 40° F – 90° F (4° C – 32° C).
- E. An acceptable product which meets the above criteria is **Five Star® Clarifier Resurfacer** as manufactured by Five Star Products, Inc., Shelton, CT [203-336-7900].
- F. The material shall be installed in accordance with the material manufacturer's installation instructions. Any deviations to the material manufacturer's handling, mixing, and/or installation instructions that are required shall be approved in advance by the project engineer and/or the project manager.

¹ The data shown above reflect typical results based on laboratory testing under controlled conditions. An allowance of +/- 10% is generally considered acceptable. Reasonable variations from the data shown above may result in the field. Test methods are modified where applicable.

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FIVE STAR PRODUCTS, INC.
2 Enterprise Drive • Suite 303
Shelton, CT 06484 USA
Phone: +1 203-336-7900 • 1-800-243-2206

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07-12-2024 • na13530eng-rA