

Performance Testing of Flexible Cementitious

General Product Description

Flexible cementitious is generally a 2-part, polymer-modified cementitious waterproofing system.

Critical Conditions to Note

Weather conditions such as ambient temperature, precipitation, and humidity can affect the quality of the application and performance of the product. Cementitious membrane systems require a damp surface to improve the adhesion of membrane to the concrete surface. However, standing water must be removed from the concrete surface. The concrete surface should be saturated with clean water to achieve saturated surface-dry (SSD) condition prior to the application of the first coat of waterproofing membrane. Concrete surface that is under constant immersion or with an active hydrostatic head of water may not be suitable for usage of flexible cementitious. Flexible cementitious waterproofing membrane is not suitable to be used as an exposed system.

Recommendations for Laboratory Testing Conditions

Type of Tests	Recommended Curing Conditions
Tensile Strength and Elongation	Consistent 23 °C and 70% relative humidity for a period of 28 days
Adhesion to Concrete	23 °C and 50% relative humidity for a period of 28 days

Type of Tests	Recommended Testing Conditions
Tensile Strength and Elongation	Testing conditions: 23 °C and 50% relative humidity. Specimens shall be conditioned for at least 3 hrs when the test temperature is 23 °C. Maintain relative humidity at 50 ± 5% and condition the specimens for at least 24 hours prior to testing.
Adhesion to Concrete	

Type of Tests	Recommended Curing/Testing Conditions for Quick test
Tensile Strength and Elongation	1. Curing condition at 70% relative humidity for 7 days. 2. Testing conditions with specimens conditioned at 40 °C for 30 mins without air cycling. Maintain relative humidity at 50% and condition the specimens for at least 30 mins prior to testing.

Type of Tests	Recommended Testing Equipment Loadcell and Speed
Tensile Strength and Elongation	500mm / min with dumb-bell Die C Specimen using up to a maximum load cell capacity of 100N.

Type of Tests	Recommended Testing Conditions
Adhesion to Concrete	At least 28-day cured concrete is used as the substrate for application of waterproofing membrane for test

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