

FIVE STAR STRUCTURAL CONCRETE® ES

PERFORMANCE SPECIFICATION

A. The concrete repair material shall be a preblended, prepackaged cement-based mortar requiring only the addition of potable water. The material shall not contain any chlorides or lime other than amounts contained within the hydraulic composition. The manufacturer shall be ISO 9001 certified and have at least five years experience in the manufacture of cement-based concrete repair materials.

B. The concrete repair material shall meet all the following typical performance criteria when cured at 73°F (23°C):

1.	Compressive Strength, ASTM C 109	
	6 Hours	3000 psi (20.7 MPa)
	1 Day	5000 psi (34.5 MPa)
	7 Days	6000 psi (41.4 MPa)
2.	Bond Strength, ASTM C 882	
	1 Day	2000 psi (13.8 MPa)
3.	Length Change, extended with pea gravel, ASTM C 157	
	28 Days Wet	+0.03%
	28 Days Dry	-0.05%
4.	Chloride Ion Permeability, ASTM C 1202	
	3 Days	Very Low
5.	Coefficient of Thermal Expansion, ASTM C 531	
		5.0 x 10 ⁻⁶ in/in/°F (9.0 x 10 ⁻⁶ mm/mm/°C)

The data shown above reflect typical results based on laboratory testing under controlled conditions. Reasonable variations from the data shown above may result. Test methods are modified where applicable.

C. Five Star Structural Concrete ES may be extended with clean damp coarse aggregate meeting the requirements of ASTM C 33. Aggregate sample shall be submitted for approval. Contact product manufacturer for aggregate extension guidelines.

D. The concrete repair material shall be Five Star Structural Concrete ES, as manufactured by Five Star Products, Inc., Fairfield, Connecticut.