

## FIVE STAR STRUCTURAL CONCRETE® UNDERWATER HP

### PERFORMANCE SPECIFICATION

- A. The concrete repair material shall be a preblended, prepackaged cement-based mortar suitable for hand placement underwater 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	
	3 Hours	2000 psi (13.8 MPa)
	1 Day	3000 psi (20.7 MPa)
2.	Bond Strength, ASTM C 882	
	7 Days	1150 psi (7.9 MPa)
3.	Coefficient of Thermal Expansion, ASTM C 531	
		5.0 x 10 <sup>-6</sup> in/in/°F (9.0 x 10 <sup>-6</sup> 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. The concrete repair material shall be Five Star Structural Concrete Underwater HP, as manufactured by Five Star Products, Inc., Fairfield, Connecticut.