Material Performance Specification
Five Star® Fluid Epoxy

A. Epoxy (adhesive) grout shall be 100% solids, self-leveling consistency, rapid cure, pre-packaged fluid epoxy system containing thermosetting epoxy resins and inert fillers.

B. The manufacturer shall be ISO 9001 certified and have a minimum of 25 years of experience in the manufacture of epoxy grouts.

C. The manufacturer shall provide an experienced technical representative to be present during a pre-grout meeting and during the initial mixing and placement of the materials with sufficient notice (5 working days).

D. The grout material shall meet all the following typical performance criteria when cured at 70°F (21°C) [1]:

1.	**Compressive Strength,** ASTM C579A, Load rate of 0.125 inches per minute	
	6 Hours	11,000 psi (75.8 MPa)
	1 Day	13,000 psi (89.6 MPa)
	7 Days	14,000 psi (96.5 MPa)
2.	**Compressive Modulus,** ASTM C579A, Load rate of 0.125 inches per minute	
	6 Hours	3.5×10^5 psi (2.4×10^3 MPa)
	1 Day	4.3×10^5 psi (2.9×10^3 MPa)
	7 Days	4.8×10^5 psi (3.3×10^3 MPa)
3.	**Creep,** ASTM C1181, 1 Year, 400 psi (2.8 MPa), 140°F (60°C)	10×10^{-3} in/in (mm/mm)
4.	**Tensile Strength,** ASTM C307	2,500 psi (17.2 MPa)
5.	**Flexural Strength,** ASTM C580	6,800 psi (46.9 MPa)
6.	**Flexural Secant Modulus,** ASTM C580	1.0×10^6 psi (6.9×10^3 MPa)
7.	**Coefficient of Thermal Expansion,** ASTM C531	32×10^{-6} in/in/°F (57.6×10^{-6} mm/mm/°C)
8.	**Bond to Concrete,** ASTM C882	Concrete Failure
9.	**Working Time**	30 minutes
10.	**Placement Depth** (in a single/monolithic pour)	⅛ inch – 1½ inches (3 mm – 38 mm)
11.	**Application Temperature**	55°F – 95°F (13°C – 35°C)

E. An acceptable product which meets the above criteria is **Five Star® Fluid Epoxy** as manufactured by Five Star Products, Inc., Shelton, CT [203-336-7900].

F. The grout shall be installed in accordance with the grout manufacturer's installation instructions. Any deviations to the grout 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. Reasonable variations from the data shown above may result in the field. Test methods are modified where applicable.

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