

FIVE STAR® FAST SET CEMENT-L

PERFORMANCE SPECIFICATION

- A. The cement shall be used to blend a field mixed concrete. The material shall not contain any chlorides or lime other than amounts contained within the cement. 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 produced from this cement shall be capable of meeting all the following typical performance criteria when cured at 73°F (23°C):

1.	Compressive Strength, ASTM C 39	
	2 Hours	2000 psi (13.8 MPa)
	3 Hours	2500 psi (17.2 MPa)
	1 Day	4000 psi (27.6 MPa)
	7 Days	4500 psi (31.0 MPa)
	28 Days	5500 psi (37.9 MPa)
2.	Length Change, ASTM C 157	
	7 Days Dry	- 0.003%
	28 Days Dry	- 0.004%
3.	Freeze/Thaw Resistance, ASTM C 666A	
	Relative Durability Factor	95%
4.	Flexural Strength, ASTM C 78	
	3 Hours	620 psi
5.	Chloride Ion Permeability, Coulombs	
	ASTM C 1202	
	28 Days	290 (very low)

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

C.	Trial Mix Design	SSD Mix Design ⁽¹⁾
		lb/Cubic Yard
	Fast Set Cement-L	658
	Concrete Sand ⁽²⁾	1577
	3/8" Pea Gravel ⁽²⁾	1291
	Water ⁽³⁾	130
	Dow Modifier A ⁽⁴⁾	205
	Slump	4 to 8 inches (102 mm to 203 mm)
	Admixtures ⁽⁵⁾	
	Work Time	15 minutes
	Initial Set (ASTM C 266)	35 minutes

⁽¹⁾These are suggested starting weights. Final quantities shall be based on fine and coarse aggregate which is available at the job site.

⁽²⁾Aggregate must meet the requirements of ASTM C 33.

⁽³⁾Net potable water added should be adjusted to control slump and not to exceed a maximum water:cement ratio of 0.40.

⁽⁴⁾As manufactured by Dow Chemical Company, Midland, MI (800) 447-4369.

⁽⁵⁾Retarding admixture may be added for specific job requirements and weather conditions. Trial mixes should be performed to finalize dosage and mix design.

- D. The cement used to blend a field mix concrete shall be Five Star Fast Set Cement-L as manufactured by Five Star Products, Inc., Fairfield, Connecticut.