CGM-G60

HIGH PERFORMANCE NON-SHRINKAGE CEMENTITIOUS MICRO CONCRETE

CGM-G60 is a high performance non-shrinkage cementitious micro concrete designed for structural strengthening, retrofitting, and deep repair works. Formulated with high strength cement, graded aggregates, and functional additives, it offers excellent flowability, strong bonding, and controlled micro expansion. It self-consolidates during curing and compensates for shrinkage through plastic expansion—ensuring void-free, dense placement without vibration or segregation.

Chloride-free, non-corrosive, and environmentally safe, CGM-G60 mixes easily and develops early strength rapidly. Suitable for pouring or pumping into complex or restricted spaces, it delivers long-term durability for demanding structural applications such as jacketing, section enlargement, and heavy structural rehabilitation.

Complies with ASTM C 595 (Standard Specification for Blended Hydraulic Cement) and GB 50728 (Technical Code For Safety Appraisal Of Engineering Structural Strengthening Materials).

Usage

CGM-G60 is suitable for the following applications:

- Section enlargement and structural strengthening (e.g., column and beam jacketing)
- Deep repairs of concrete structures such as bridges, culverts, and slabs
- Precision structural retrofitting and rehabilitation works
- Jacketed construction or encasement of steel structures
- Localized structural repair requiring increased thickness and strength

Technical Specification

Property	Test Method / Condition	Curing Time	Strength
Compressive Strength	ASTM C109 (50 mm cubes)	1 day	≥ 25 MPa
		3 days	≥ 40 MPa
		28 days	≥ 60 MPa
Splitting Tensile Strength	ASTM C496	7 days	≥ 2.5 MPa
		28 days	≥ 3.5 MPa
Flexural Strength	ASTM C348	7 days	≥ 6.0 MPa
(Tensile in Flexure)		28 days	≥ 9.0 MPa
Shrinkage	ASTM C157	28 days	< 0.04%
Expansion	ASTM C827	Plastic state	0.3% – 1.0%
Confinement to Steel	ASTM C882, ASTM A944	28 days	≥ 5.0 MPa
Corrosion	ASTM C876, C1202, G109	0 (newly mixed)	None

Product Specification

Composition	Portland cement, selected fillers and aggregates, special additives
Packaging	25 kg bag
Shelf life	6 months from date of production
Storage conditions	The product must be stored properly in undamaged and unopened, original sealed packaging, in dry conditions at temperatures between +5 °C and +35 °C. Protect from moisture, direct sunlight and frost.
Appearance	Powder / Grey

Application Specification

Consumption	~1950 kg/cum	
Layer thickness	Minimum	25 mm per pour
	Maximum	100 mm per pour
	Higher layer thickness can be done with addition of aggregates. Contact Q-MAX Technical Services team for additional information.	
Appearance	+5 °C min. / +40 °C max.	
Pot Life	~30 minutes	

Application Instruction

- Mixing: Mechanically mix the micro-concrete according to the recommended ratio. Use only full bags for best results. Do not add any additives.
- Substrate Preparation: Ensure surfaces are clean, sound, and pre-wetted (no standing water). Steel reinforcement must be rust-free and may require an anti-corrosion treatment.
- Placement: Secure, watertight formwork is essential. Pour or pump without interruption. For depths over 100 mm, graded coarse aggregate may be added as per design.
- Curing: Maintain formwork for at least 3 days. Cure exposed surfaces immediately after demolding using approved methods to prevent moisture loss.

Note: For special site conditions or guidance, please contact the supplier.

Manufacturer & Supplier

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