

Sino-Sina Building Materials Co., Ltd

Seismic High-Ductility Masonry Concrete Technical Data Sheet

Product Description

Seismic High-Ductility Masonry Concrete is a fiber-reinforced cement-based composite designed for masonry reinforcement in earthquake-prone areas. It offers high strength, toughness, crack resistance, and damage tolerance, maintaining structural integrity even when cracks form under bending stress.

Applications

- Seismic reinforcement of masonry walls, beams, slabs in residential, school, and bridge structures.
- Repairing defects like honeycombs, cracks, exposed rebar, and surface smoothing.
- External reinforcement with high-ductility polymer mortar.
- Thickening protective layers to improve concrete durability.

Features and Benefits

- Bending: Deflection hardening with fine, dispersed cracks; "bendable concrete" that cracks without failing.
- Tensile: Strain hardening; maintains strength post-cracking; tensile strain >100x ordinary concrete.
- Seismic Effect: Quick construction, short duration, lower cost than traditional methods.
- High fatigue and impact resistance.
- Self-compacting: No tamping or vibration needed.
- Fire Resistance: Fibers melt to release vapor, preventing decomposition.
- Self-Healing: Improves durability in varying environments.
- Environmentally friendly.

Technical Data

Meets DB34/T3469-2019 standards.

Mechanical Performance Indicators

Test Item	Curing Age	Class I	Class II	Class III
Equivalent Bending Toughness (kJ/mš)	60d	160.0	120.0	80.0
Equivalent Bending Strength (N/mmš)	60d	11.0	10.0	9.0
Flexural Strength (N/mmš)	60d	12.0	12.0	12.0
Cubic Compressive Strength (N/mmš)	60d	50.0	50.0	50.0

Durability Indicators

Test Item	Technical Indicators
Freeze-Thaw (Rapid Freezing)	F300
Water Penetration (Stepwise Pressurization)	P12
Chloride Ion Penetration (RCM)	RCM-IV
Sulfate Erosion Resistance	K90
Carbonation Depth (28d)	2.0mm

Packaging and Storage

- Packaging: 20kg composite bags.
- Shelf Life: 3 months in dry, ventilated indoor storage; sealed bags, protect from moisture/freezing.

Application Instructions

1. Base Treatment: Clean surface, remove plaster/loose layers, oil, dirt.
2. Wet Surface: Thoroughly wet base before application.
3. Mixing Ratio: A (40kg): B (320g fiber): water; mix up to 4 portions.
4. Mixing: Add materials/water, stir 3-4 min to gel, add fibers, stir until dispersed.

Precautions

Do not add extra materials/water; contact supplier for issues. Clean mixer after each batch.

Contact Information

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