



RAPID HARDENING COMPOSITE SULPHOALUMINATE CEMENT

Rapid-hardening hydraulic cement | Fast setting | High early strength | Low-temperature construction | Durable cement-based formulations

PRODUCT OVERVIEW

A rapid-hardening hydraulic cement for fast setting, high early strength, low-temperature construction and durable cement-based formulations.

- A mineral-based hydraulic cement mainly composed of anhydrous calcium sulphoaluminate, dicalcium silicate and an appropriate amount of gypsum.
- Designed for fast setting, rapid hardening and stable strength development.
- Available grades in this brief: 42.5 and 52.5.
- Used in cement-based systems requiring early strength, durability and controlled volume stability.

KEY FUNCTIONS

Rapid set Fast return to service	High early strength 1-day strength development	Low-temperature use Supports winter construction	Shrinkage control Micro-expansion, low shrinkage
Durability Dense matrix, impermeability	Frost resistance Suitable for cold climates	Corrosion resistance Supports marine / water works	Broad compatibility Mortar, concrete, precast systems

RECOMMENDED APPLICATION AREAS

Rapid Repair & Emergency Works • Rapid repair mortars • Road and bridge repair • Emergency construction • Fast return-to-service works	Winter & Low-Temperature Works • Cold-weather construction • Low-temperature repair mortar • Underground and tunnel works • Shotcrete and anchoring support	Precast & Specialty Systems • Precast cement products • Grouts and non-shrink materials • Self-leveling and dry-mix mortars • Water and marine engineering
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TYPICAL PERFORMANCE ROUTE

Fast Hardening Cementitious Systems • Shortens construction time • Provides high early strength • Supports rapid demoulding and early loading	Durable Cement-Based Materials • Improves compactness of hardened matrix • Helps reduce shrinkage cracking risk • Supports impermeability, frost and corrosion resistance
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TECHNICAL DATA — GRADES 42.5 / 52.5

The following values are provided for the 42.5 and 52.5 grades. 6-hour data and other grades are not included in this brief.

Item	Grade 42.5	Grade 52.5
Specific surface area	≥350 m²/kg	≥350 m²/kg
Initial setting time	≥25 min	≥25 min
Final setting time	≤180 min	≤180 min
Compressive strength, 1 day	≥30.0 MPa	≥40.0 MPa
Compressive strength, 3 days	≥42.5 MPa	≥52.5 MPa
Compressive strength, 28 days	≥45.0 MPa	≥55.0 MPa
Flexural strength, 1 day	≥6.0 MPa	≥6.5 MPa
Flexural strength, 3 days	≥6.5 MPa	≥7.0 MPa
Flexural strength, 28 days	≥7.0 MPa	≥7.5 MPa

KEY PRODUCT CHARACTERISTICS

Characteristic	Description
Rapid hardening and high early strength	The product develops early strength quickly and helps shorten construction cycles, especially for rapid repair, fast demoulding and urgent works.



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Adjustable setting profile	The setting time is suitable for practical construction and can be adjusted according to project requirements and formulation design.
Low-temperature performance	The product is suitable for winter construction and low-temperature repair works where early strength development is required.
Micro-expansion and low shrinkage	It helps improve dimensional stability, reduce shrinkage cracking risk and increase compactness of cement-based materials.
Durability	The hardened system has good impermeability, frost resistance and corrosion resistance, supporting water, marine and durable construction applications.

DIRECTIONS FOR USE

- Trial mix testing is recommended before use.
- Water-binder ratio, admixture dosage and working time should be confirmed according to the application.
- Compatibility with water reducers, retarders, accelerators and expansive agents should be verified.
- Keep dry, protect from moisture and use promptly after opening.

PACKAGING AND STORAGE

- 25 kg bags
- 1,000 kg jumbo bags / bulk bags

Available in bag or jumbo-bag packaging according to customer requirements. Store in a dry, ventilated and moisture-proof environment. Avoid rain, dampness and caking. Product should be inspected before use if moisture or caking is observed.

COMPANY INFORMATION

Item	Information
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