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RECIPRO40
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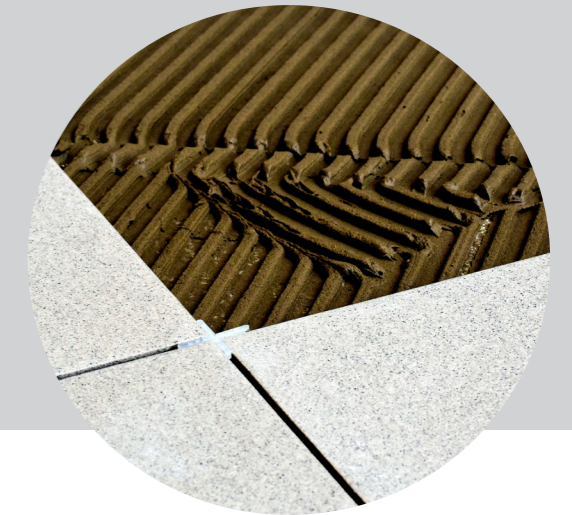
HIGH STABILITY + PERFORMANCE



Recipro40 is a calcium aluminate cement specifically developed for construction chemicals and technical mortar applications. It combines high early strength with adjustable setting time, ensuring reliable performance in projects that require rapid commissioning. Thanks to its excellent sulfate resistance and outstanding abrasion durability, Recipro40 provides long-term stability even under demanding environmental conditions. The development of Recipro40 involved advanced analytical methods and integrated quality control processes:

- XRF for raw material chemical analysis
- XRD Rietveld for phase composition control
- Laser diffraction for particle size distribution
- Performance testing in dry-mix systems
- Cement analysis in compliance with TS EN 14647

RECIPRO40 IS PRODUCED ACCORDING TO EN 14647 STANDARDS AND HAS THE FOLLOWING FEATURES.



Physical and Mechanical

Physical and Mechanical	Çimsa Values (%)
Initial Set (hr)	1 - 4
Final Set	up to 120 minutes after initial set
Compressive Strength (MPa)	6 sa ≥ 35,0 / 24 sa ≥ 60,0
Specific Gravity (g/cm ³)	≤3,3
Residue at 45 microns (%)	≤10,0
Residue at 90 microns (%)	≤2,0
Blaine (cm ² /g)	≥3000

Chemical Composition

Al ₂ O ₃ (%)	CaO(%)	SiO ₂ (%)	Fe ₂ O ₃ (%)
≥38,0	≤40,0	≤5,0	≤18,0

TiO ₂ (%)	MgO (%)	SO ₃ (%)	Na ₂ Eq Alkali (%)	Cl-as ions (%)	S-as ions (%)
≤3,0	≤1,0	≤0,2	≤0,3	≤0,01	≤0,1

Phase Composition

Major Mineral Phase	: CA
Minor Mineral Phases	: C ₁₂ A7, C ₄ AF

1 min

Adjustable initial setting; enables early strength gain within minutes.

60 MPa

Achieves 60 MPa compressive strength in 24 hours - ideal for fast-track projects.

MAX

Dense phase structure ensures superior abrasion resistance and long-term stability.

-5 °C

Safe and easy application even below freezing (-5 °C).



For mortar testing in accordance with EN 14647, a mix prepared with CEN standard sand and a water-to-cement ratio of 0.40 is used.

ADVANTAGES



ADJUSTABLE SETTING TIME

Recipro40 offers flexibility in setting time for modern technical mortar systems. Applicators can adjust the initial set according to project requirements and achieve early strength within the first minutes.



HIGH EARLY STRENGTH

When used as a single binder, Recipro40 delivers exceptional early strength. While standard mortars reach around 18 MPa in 6 hours, Recipro40 exceeds 50 MPa, providing a major advantage for projects requiring rapid commissioning.



RESISTANCE TO SULFATE ATTACK

In conventional Portland cement systems, sulfate attack occurs due to reactions between aluminates and sulfate ions, leading to expansion and cracking over time. This risk increases in environments exposed to seawater, groundwater, or chemicals. Recipro40 contains no tricalcium aluminate phase and forms different hydration products, ensuring superior resistance to sulfate exposure.



HIGH FINAL STRENGTH

Thanks to the natural advantages of CAC technology, Recipro40 achieves 95% of its ultimate strength within 24 hours—going beyond the 28-day strength of ordinary Portland cement and delivering consistent performance for high-speed projects



LOW CHROMIUM +6 CONTENT

Elevated chromium (VI) levels can cause skin irritation and sensitivity. EU regulations require all cement products to contain less than 2 ppm of Cr(VI). Recipro40 naturally meets this requirement, ensuring safer handling and compliance with health standards.



RESISTANCE TO ABRASION

Recipro40's dense and stable phase structure provides excellent abrasion resistance in self-leveling screeds, tile adhesives, and specialty concretes. It also ensures long-lasting performance in areas exposed to mechanical stress. When combined with Rego, the system's overall abrasion resistance is significantly enhanced.



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