

ELECTROLAND ALUMINATE CEMENT

ELECTROLAND cement is a calcium-aluminate cement with versatile properties including high heat refractory, rapid hardening and very high mechanical strength.

Resistant to aggressive environments (sulphates, marine, diluted acids) as well as to abrasion and high temperatures (refractory applications), ELECTROLAND is recommended in the formulation of special mortars, joints and high-tech self-levelling screeds.



CEMENT FEATURES

Chemical Characteristics

Standard Value		Standard Value		Standard Value	
Al ₂ O ₃	41%	FeO	4%	S ²	0,02%
CaO	38%	SiO ₂	4%	SO ₃	0,02%
Fe ₂ O ₃	11%	Cl	0,01%	Alkalies	0,2%

Mechanical and Physical Characteristics

Standard Value	Standard Value
Compression strength 6 h (MPa) : 50	Compression strength 24h (MPa) : 75
Initial setting time (min) : 210	Final setting time (min) : 230
Blaine specific surface (cm ² /g) : 3270	

Additional Properties

Additional Characteristics	Additional Characteristics
Laser granulometry D(v,0.9) (um) <70	Melting temperature 1280°C
Apparent gravity (g/cm ²) : 1,1	Specific gravity (g/cm ²) : 3,2
Primary mineral component: Monocalcium Aluminate CaO·Al ₂ O ₃	
Secondary mineral component: Ca ₂ Fe AlO ₅ , Ca ₁₂ Al ₁₄ O ₃₃ , β-Ca ₂ SiO ₄ Ca ₃ TiFe ₂ O ₈ , FeO	

RECOMMENDED USAGE

ELECTROLAND is recommended for mortars and concrete that require the following:

- Rapid hardening, even in cold weather.
- Resistance to the attack of sulphates and certain acids ($\text{pH} \geq 4$).
- Chemical and bacteriological resistance.
- Resistance to abrasion /mechanical impact.
- Suitability to the construction chemistry industry characterised by rapid setting and hardening (water leak sealers, adhesives, mortars, grouts, self-levellers, etc.) and by rapid hardening and drying with dimensional control (self-levellers, grouts)
- Refractory, refractory-insulators and resistant to thermal shock.



PRECAUTIONS FOR USE

ELECTROLAND is not recommended for prestressed concrete or mass concrete in large volumes.

It is also not recommended for soil stabilization or cement-treated bases for roads as well as mortars and concretes in contact with media that can release alkali.

In view of its high reactivity, mortars and concretes with ELECTROLAND must be cured during the first 24 hours.

A minimum cement dosage of 400 kg/cm^3 and a maximum water/cement ratio of 0,40 is required.

DISPATCH AND STORAGE

Available in bulk, in big bags of 1,050kg, 1,200 and 1,500 kg and in bags of 25 kg.

ELECTROLAND should be stored in dry and ventilated places. Bulk storage should take place in sealed silos.

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