

ALUMINITE REFRACTORY CEMENT

ALUMINITE is a refractory cement specifically designed for the production of heat-resistant, insulating mortars and concretes. ALUMINITE is made of calcium aluminates and aluminium rich minerals that are both ground to micron size.

By raising its surface temperature, its components are sintered which increases its melting point and mechanical strength. ALUMINITE hardens quickly which contributes to its rapid demolding.



CEMENT FEATURES

Chemical characteristics

Standard Value		Standard Value		Standard Value	
Al ₂ O ₃	42,9%	FeO	4,5%	S ²	0,03%
CaO	36,1%	SiO ₂	2,9%	SO ₃	0,10%
Fe ₂ O ₃	11,4%	Cl	0,01%	Alkalies	0,07%

Mechanical strengths (EN 196-1 modified by EN 14647) setting time (EN 196-3) and Blaine specific surface areas (EN 196-6).

Standard Value	Standard Value
Compression strength 6 h (MPa) : 47,7	Compression strength 24h (MPa) : 65,2
Initial setting time (min) : 145	Final setting time (min) : 165
Blaine specific surface (cm ² /g) : 3270	

Additional Characteristics	Additional Characteristics
Primary mineral component: CaAl ₂ O ₄	Melting temperature 1360°C
Apparent gravity (g/cm ³) : 1,2	Specific gravity (g/cm ³) : 3,2
Laser granulometry D(v,0.9) (um) less than 90 um	

This product does not require the addition of a chromium (VI) reducing agent.

RECOMMENDED USAGE

Heat-resistant, insulating mortars and concrete, including those resistant to thermal shock (with appropriate aggregates).

Fields of use include:

- The iron and steel industry
- The photochemical industry
- Incinerators
- The aluminium industry
- Ceramics
- Chimneys and braai areas

ALUMINITE is not suitable for non-refractory or non-insulating applications.

PRECAUTIONS FOR USE

Given the high reactivity of this cement, care should be exercised during the curing process, particularly in hot, dry and windy climates.

Intensive curing is recommended three hours after application and over the next 24 hours.

The first temperature ramp rate should be gradual so as to avoid fissures caused by the rapid discharge of water.

A ramp rate of 50°C per hour from room temperature up to 600°C is recommended and should be maintained for two hours. Finally, the temperature can be raised to the required level.

Once the ALUMINITE is fired, subsequent temperature ramp rates are unaffected.

DISPATCH AND STORAGE

Available in 25kg bags, that must be stored in ventilated, dry conditions and protected from air and ground moisture.



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