

## Technical data sheet

### i.tech ALI CEM GREEN



### Description

i.tech ALI CEM GREEN is a mix of sulphoaluminate clinker (i.tech ALI PRE GREEN) and micronized calcium sulphate dosed in stoichiometric proportion with a 40% content of pre-consumer recycled material and CO<sub>2</sub> emissions (Core Process) of 400 kg/t versus the more than 750 kg/t for CEM I cements. i.tech ALI CEM GREEN allows users to adjust the setting time of their formulations by varying the mix ratio to Portland cement.

### Applications

Mixed with Portland cement, it is recommended for the following formulations:

- Technical rapid-setting mortars (for repairs, fixing, etc.)
- Rapid or semi-rapid casting mortars
- Mortars for mechanical spraying
- Non-shrink mortars
- Grouts
- Rapid or semi-rapid drying screeds
- Self-levelling rapid drying screeds
- Rapid sealants

### Sustainability

i.tech ALI CEM GREEN production has low environmental impacts. The production of hydraulic binders like cement, is associated with the use of non-renewable resources such as limestone coming from quarries close to production plants and with high CO<sub>2</sub> emissions.

i.tech ALI CEM GREEN minimizes both impacts and, furthermore reduces the need for waste disposal by using pre-consumer recycled material otherwise destined for landfills. Cements belonging to the Italcementi GREEN Portfolio are sustainable products because they are characterized by :

- lower consumption of non-renewable resources:
- lower global warming potential of the production process
- avoided landfilling

and because they

- reduce the need of materials from quarries
- use as constituents recycled materials pre-consumer and post-consumer that, otherwise, would be disposed of
- reduce CO<sub>2</sub> emissions

Italcementi promotes low environmental impact products through transparent communication. The Product Stewardship by Italcementi defines as GREEN those binders that comply with both of the following requirements:

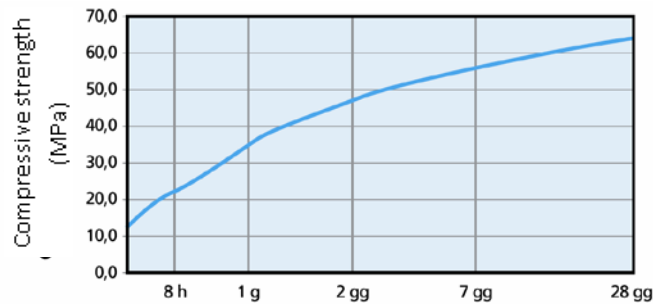
- CO<sub>2</sub> emissions (Core processes) lower than 550 kg/t
- use of 30% at least of recycled material pre-consumer or post-consumer



## Physical & mechanical properties

Specific surface area – Blaine fineness (cm <sup>2</sup> /g)
5000 ± 500
Dimensional stability (soundness)
10
Initial setting time (min)
≤ 25

The initial setting time test was carried out according to UNI EN 196-3, but with a different w/c ratio (w/c = 0.33 ± 0.02).



The strength measurement test was carried out on standard mortars according to UNI EN 196-1.

## Benefits

- i.tech ALI CEM GREEN allows the formulation of shrinkage-compensating products.
- i.tech ALI CEM GREEN allows controlling both setting time and strength development by changing the mix ratio to Portland cement.
- i.tech ALI CEM GREEN allows the formulation of products with rapid strength development.
- i.tech ALI CEM GREEN provides strength gain values in the medium and long term in excess of those shown by the best performing Portland cements.
- i.tech ALI CEM GREEN, if correctly stored, provides excellent stability over time, so that formulations do not require to be adjusted as a function of product aging.
- i.tech ALI CEM GREEN allows the production of premixes with excellent stability properties, thus extending the shelf life of products.
- i.tech ALI CEM GREEN is produced with micronised calcium sulfate dosed in stoichiometric proportion with respect to clinker, favoring the use of balanced mixtures.

i.tech ALI CEM GREEN may allow to obtain credits for some of the criteria in the certification system LEED (Leadership in Energy and Environmental Design) of buildings in urban areas.

## Packaging and storage

i.tech ALI CEM GREEN is available in bulk, big bags and 25 kg bags. The bags are stacked on pallets (1000 kg or 1600 kg) and protected with stretch film.

Store in fresh and dry place.

**For professional use only. The user is advised to conduct tests and assessments in order to define the suitability of the product for the intended application**

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