Technical Data Sheet

i.pro TERMOCEM GREEN 32,5 N-LH

CEM III/A 32,5 N LH

Description

i.pro TERMOCEM GREEN 32,5 N LH is a blastfurnace slag cement with a pre-consumer recycled material content of over 30% and is produced with CO2 emissions (core process) lower than 550 kg/t against a typical value of more than 750 kg/t for a CEM I.

Composition

In compliance with the chemical composition requirements specified in UNI EN standard 197-1, the product has a clinker content ranging from 35 to 64% by cement mass, excluding calcium sulphate and additives, 36-65% granulated blast furnace slag and 0-5% of mirror constituents.

Standard Requirements

CHEMICAL REQUIREMENTS	PHYSICAL REQUIREMENTS	MECHANICAL REQUIREMENTS
Loss on ignition ≤ 5%	Heat of hydration ≤ 270 J/g	Compressive strength
Insoluble residue ≤ 5%	Initial setting time ≥ 75 min	at 7 days ≥ 16,0 MPa
Sulphates (as SO_3) ≤ 4%	Expansion ≤ 10 mm	at 28 days ≥ 32,5 MPa
Chlorides ≤ 0,10% *		

* Cement may have a chloride content in excess of 0.10%; if that is the case, the actual chloride content s hall be declared.

Sustainability

Italcementi GREEN Line cements are sustainable products as they involve a:
- lower consumption of non-renewable resources
- lower land consumption
- reduced need for excavation material
- use of pre or post-consumer recycling materials as constituents that would otherwise be sent to landfill
- reduced CO2 emissions

Italcementi promotes its products with low environmental impact with clear and transparent communication.

Italcementi Products Stewardship defines GREEN binders products that simultaneously satisfy the following requirements:
- CO2 emissions (Core processes) lower than 550 kg / t
- Use of at least 30% of recycled material coming from pre or post-consumption

Applications

High early compressive strength combined with resistance to chemical attack and low heat of hydration make the product the best choice for:

- works and structures set in river and maritime areas;
- works involving the use of both plain and reinforced concrete that require high final strength when set in chemically aggressive environments;
- massive structures;
- tall or slender cast-on-site non-prestressed structures;
- foundation structures;
- industrial floors;
- precast elements (e.g. manholes and pipes);
- water treatment systems (for moderate sulphate concentrations)
- roads, hihways and parking lots;
- road bases and soil stabilization.
- Airport runways

Benefits

The content in granulated blastfurnace slag (from 36 to 65%) makes the product resistant to chemical attack. The product is recommended for construction of structures exposed to moderately aggressive environments (aggressive CO_2 and chlorides), including sulphate attack and solubilization by water leaching, and in contact with glycerides (oils and fats).

The low amount of hydration heat evolved by an LH cement permits building massive structures and, more generally, works for which a low hydration-heat cement is prescribed. The smaller amount of heat of hydration evolved at equal strength class, which is typically of all blastfurnace cement types, is guaranteed by the LH classification of this cement.

Precautionary measures

Blastfurnace slag cement is sensitive to low temperatures. Cold climate conditions actually cause both hardening reaction rates and early strength development to slow down. In cold weather, it is therefore advisable to increase the cement content and/or to use chloride-free set accelerating admixtures.

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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