



Italcementi
HEIDELBERGCEMENT Group



Technical Data Sheet

i.tech ULTRACEM 52,5 R

CEM I 52,5 R

Description

i.tech ULTRACEM 52,5 R is a Portland cement type I featuring very high normalised strength and high early strength.

Composition

In compliance with the chemical composition requirements specified in UNI EN standard 197-1, the product has a clinker content ranging between 95 % and 100% by cement mass excluding calcium sulphate and additions, while the remaining percentage is made up of minor constituents, if any.

Standard requirements (UNI EN 197-1)

CHEMICAL REQUIREMENTS*

Loss on ignition	$\leq 5.0\%$
Insoluble residue	$\leq 5.0\%$
Sulphates (as SO_3)	$\leq 4.0\%$
Chlorides	$\leq 0.10\%$

PHYSICAL REQUIREMENTS*

Initial setting time	≥ 45 min
Soundness	≤ 10 mm

MECHANICAL REQUIREMENTS*

Compressive strength

at 2 days	≥ 30.0 MPa
at 28 days	≥ 52.5 MPa

* characteristic value



Applications

High compressive strength, particularly at early ages, makes the product ideal for the following applications:

- precasting (with or without steam curing) especially for structures with demanding static and/or architectural requirements;
- cast-in-place prestressed concrete structures;
- vertical or slim non-prestressed structures;
- manufacturing and /or casting processes in need of fast mould/formwork removal and / or rapid handling;
- gunning projects (Spritz Beton/shotcrete)
- dry-mix products.

Benefits

Significant benefits result from the adoption of steam curing: in addition to high compressive strength at longer ages, high values are already reached at 16 and 24 hours. The rapid evolution of hydration heat in the product makes it possible to place concrete in cold climates and to reduce energy costs associated with steam curing.

Precautions

The product is recommended for medium-sized construction projects. In case of projects entailing mass concrete users should opt for i.work TECNOCEM A-LL 42,5 cement or for products featuring low hydration heat evolution (i.tech PORTLAND FERRICO 42,5 N SR0, i.pro DURACEM e i.pro TERMOCEM).

Packaging and storage

The product's shelf-life is specified on the delivery note and possibly, if available, on the bag.

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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