

Technical Data Sheet

Ultracem 52,5 R

CEM I 52,5 R

CEM I 52,5 R SR5 (Rezzato)



Description

Ultracem 52,5 R is a Portland cement type I featuring very high normalised strength and high early strength in accordance with the UNI EN 197-1 standard. The compliance of the binders with the standard on resistance to sulphates is indicated by the abbreviation:

- "SR5": Sulphate resistant cement according to the UNI EN 197-1 standard

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*	UNI EN 197-1	UNI EN 197-1 SR5 Class
Loss on ignition		≤ 5,0%
Insoluble residue		≤ 5,0%
Sulphates (as SO ₃)	≤ 4,0%	≤ 3,5%
Chlorides		≤ 0,10%
C ₃ A into the Clinker	n.a.	≤ 5%

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.

Resistance to sulphates is ensured by the "SR5" classification according to UNI EN 197-1.

Precautions

The product is recommended for medium-sized construction projects. In case of projects entailing mass concrete users should opt for Tecnocem A-LL 42,5 cement or for products featuring low hydration heat evolution (Portland Ferrico 42,5 N SR0, Duracem and 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.

Last Updated October 2023

For Information

Technical Assistance

sat.ita@heidelbergmaterials.com

Heidelberg Materials Italia Cementi Spa
Via Lombardia 2A
20068 Peschiera Borromeo, MI
heidelbergmaterials.it