



ÇİMSA

CEM I 62,5 R
INSPIRA
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HIGH-PERFORMANCE WHITE CEMENT FOR ADVANCED PRECAST APPLICATIONS



Inspira is a high-performance white cement engineered for demanding precast applications. As the world's first CEM I 62.5 R white cement developed for advanced precast production, the product offers high reactivity, rapid strength gain, and excellent whiteness. Inspira delivers consistent performance in precast elements, terrazzo products, pumice-based blocks, sleepers, lightweight concrete, architectural components, and autoclaved aerated concrete (AAC). The formulation supports strong early and final strength development, reaching 65 MPa at 28 days and enabling faster mold turnover. High whiteness provides color stability and high-quality surface appearance, offering an efficient and reliable solution for precast and decorative concrete applications.

**ÇİMSA INSPIRA (CEM I 62.5 R)
IS PRODUCED IN ACCORDANCE WITH
EN 197-1 STANDARDS AND HAS THE
FOLLOWING TYPICAL PROPERTIES:**



Chemical Properties	Çimsa Values (%)	Standart Limits (EN 197-1)	
		min	max
Insoluble Residue	0,18	-	5,0
SiO ₂	21,6	-	-
Al ₂ O ₃	4,2	-	-
Fe ₂ O ₃	0,26	-	-
CaO	66,5	-	-
MgO	0,30	-	-
SO ₃	3,2	-	4,0
Loss on Ignition	1,30	-	5,0
Na ₂ O	0,63	-	-
K ₂ O	0,35	-	-
Chloride (Cl)	0,01	-	0,1
Free CaO	2,00	-	-

Physical Properties	Çimsa Values	Standart Limits (EN 197-1)	
		min	max
Specific Gravity	3.09 g/cm ³	-	-
Blaine	5800 cm ² /g	-	-
Whiteness (Y)	87%	85,0	-
Vicat Initial Set	60 min.	45,0	-
Vicat Final Set	90 min.	-	-
Water	30,50%	-	-
Volume Stability (Le Chatelier)	mm 1.0	-	10,0
Residue at 45 (microns)	1,00%	-	-
Residue at 90 (microns)	0,10%	-	-
2-Day Compressive Strength	45 MPa	40,0	-
7-Day Compressive Strength	54 MPa	-	-
28-Day Compressive Strength	65 MPa	62,5	-



ADVANTAGES



HELPS TO MANUFACTURE LIGHTWEIGHT PRECAST ELEMENTS

Çimsa's products with this feature reach the targeted strength levels in precast applications while using less cement compared to 42.5-strength-class ordinary Portland cement. With Inspira, lighter precast elements can be manufactured without compromising strength.



MAXIMUM STRENGTH

Inspira delivers maximum strength in precast manufacturing. This property facilitates achieving the desired mechanical performance in value-added construction elements.



EARLY DRYING

Drying time is critical for the delivery of insulating materials such as pumice-based products and precast elements. Since reactions proceed faster with Inspira in insulating materials, drying occurs more quickly compared to other cements.



LOW ALKALI CONTENT

When portland cement with an equivalent alkali content above 0.6% is combined with reactive siliceous aggregates, silica gel may form, causing cracking due to excessive water absorption. Inspira is resistant to alkali-silica reaction, with an equivalent alkali content below 0.6%.



LOW CHROMIUM +6 CONTENT

Chromium VI in cement products can negatively affect human health and may cause dermatological issues. Under the EU regulation from 2003, Chromium VI must be below 2 ppm in all cement types sold in the EU. Inspira contains Chromium VI below this limit and poses no negative impact on human health.



HIGH FINAL STRENGTH +++

Developed as the world's first CEM I 62.5R white cement for precast applications, Inspira delivers exceptional reactivity and provides both high early strength and outstanding final strength. A 28-day compressive strength level of 65 MPa supports durable and long-lasting performance in demanding precast designs.

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