

WHITE CEMENT
CEM II/B-LL 42,5R
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ECO WHITE


ÇİMSA

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WHITER SHADES, GREENER FUTURE



Çimsa Eco White is an environmentally friendly white cement offering a whiteness level of 86% and above with superior aesthetic performance. The use of ground marble powder and a reduced clinker ratio lowers carbon emissions and provides a sustainable solution for modern construction. The optimized formulation enables efficient mix design for construction chemicals, precast elements, glass fiber reinforced concrete (GFRC), terrazzo tiles, and architectural concrete. Stable whiteness, uniform color, and reliable strength ensure excellent results in decorative and architectural applications. The low alkali content, high volume stability, and 42.5 R strength class guarantee consistent quality and long-term durability during production. Rigorous quality control practices at Çimsa plants secure maximum stability and reliable performance in every batch.

ÇİMSA ECO WHITE WHITE CEMENT IS MANUFACTURED IN COMPLIANCE WITH EN 197-1 AND TS 21 STANDARDS AND DEMONSTRATES THE FOLLOWING CHARACTERISTICS:



Chemical Properties	Çimsa Values (%)	Standard Limits (EN 197-1)	
		min	max
Insoluble Residue	0,12	-	-
SiO ₂	16,5-17,5	-	-
Al ₂ O ₃	3,2-3,3	-	-
Fe ₂ O ₃	0,21-0,23	-	-
CaO	63,5	-	-
MgO	1,0-1,3	-	-
SO ₃	2,8-3,2	-	4,0
Loss on Ignition	11,5-12,5	-	-
Na ₂ O	0,15-0,40	-	-
K ₂ O	0,16-0,40	-	-
Chloride (Cl)	0,008-0,01	-	0,1
Free CaO	1,50	-	-

Beyazlık

L (Brightness)	93,0
a (Green Index)	(-0,8) - (-1,45)
b (Yellow Index)	2,90 - 3,90
Y (Whiteness)	86,5

Physical Properties	Çimsa Values	Standard Limits (EN 197-1)	
		min	max
Specific Gravity	2,98-3,00 g/cm ³	-	5,0
Blaine Fineness	5200-5500 cm ² /g	-	-
Whiteness (Y)	86,5 %	-	-
Initial Setting Time	100-110 min	60	-
Final Setting Time	130-135 min	-	-
Water Demand	29,0-30,2 %	-	-
Soundness (Le Chatelier)	1,0 mm	-	10
Residue on 45 µm Sieve	0,7-1,8 %	-	-
Residue on 90 µm Sieve	0,0-0,1 %	-	-
2-Day Compressive Strength	28 MPa	20,0	-
7-Day Compressive Strength	39 MPa	-	-
28-Day Compressive Strength	48-52 MPa	42,5	62,5

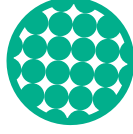


ADVANTAGES



HIGH DURABILITY

Çimsa Eco White demonstrates excellent volume stability due to its high-purity limestone content and belongs to the group of cements resistant to alkali-silica reactions. The total heat of hydration remains lower compared with non-blended cements.



HIGH WHITENESS +++

Products in the Çimsa Super White family rank among the whitest cements worldwide and provide a minimum 85 (Hunter Lab-Y) whiteness. Thanks to the stable color value, Çimsa Eco White prevents color variations in dry-mix and precast applications, ensuring a uniform surface appearance.



EFFLORESCENCE CONTROL

Efflorescence is a common aesthetic concern in Portland cement systems. When used as a binder in decorative elements, Çimsa Eco White reduces calcium hydroxide release and minimizes the risk of efflorescence formation.



LOW Cr⁺⁶ CONTENT

Hexavalent chromium (Cr⁺⁶) in cement can be harmful to human health and may cause dermatitis. According to the 2003 European Parliament directive, all cements marketed within the EU must contain less than 2 ppm Cr⁺⁶. Çimsa Eco White, through its special formulation, stays below this limit and poses no risk to human health.



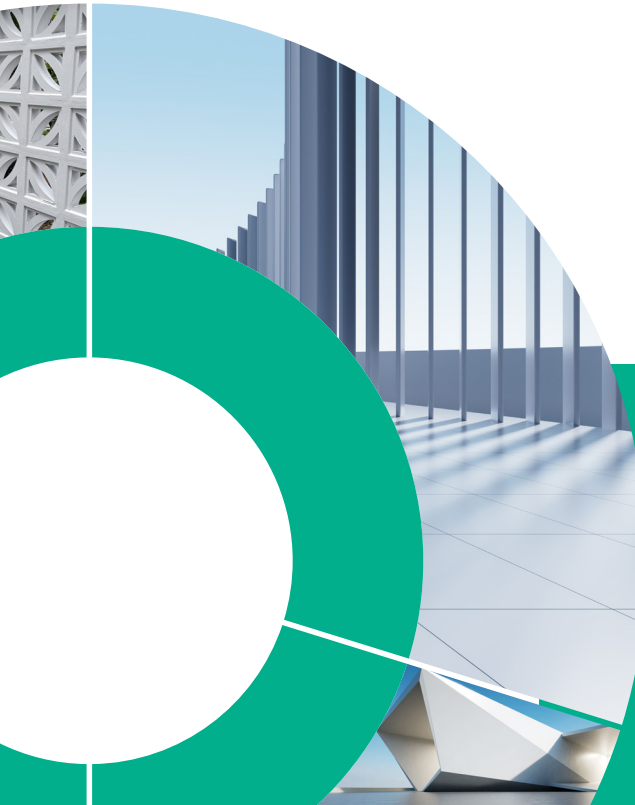
LOW ALKALI CONTENT

Portland cements with an equivalent alkali level above 0.6 % may form alkali-silica gel when used with silica-based aggregates, leading to water absorption and cracking. Çimsa Eco White contains less than 0.6 % equivalent alkali and belongs to the class of cements resistant to alkali-silica reactions.



LOW CARBON FOOTPRINT

As a blended white cement, Çimsa Eco White stands out for environmental sustainability. The presence of high-purity ground marble powder ensures both exceptional whiteness and lower CO₂ emissions. The carbon footprint is approximately 20 % lower than that of non-blended cements.



Eskişehir Plant

İstanbul Karayolu üzeri 22.km.
Çukurhisar/Eskişehir
T: (222) 411 32 00
F: (222) 411 31 31

Mersin Plant

Toroslar mah. Tekke cad. Yenitaşkent
33250 Akdeniz/Mersin
T: (324) 241 23 00
F: (324) 454 00 25