

Çimsa Izo Power 42,5

TECHNICAL DATA SHEET

1 GENERAL INFORMATION

Çimsa Izo Power 42.5 (CEM II/A-V 42.5 R) Portland fly ash cement comprises solely Portland cement clinker, fly ash, and gypsum, following the TS EN 197-1:2012 standard.

Advantages in applications;

- Thanks to the fly ash content in its components, the product exhibits enhanced workability in concrete production.
- Produced in line with all compressive strength classes, Çimsa Izo Power 42.5 Portland fly ash cement demonstrates high initial strength and continues to gain strength over the long term.
- The product's inclusion of a fine filler material results in sustainable properties, contributing to reduced greenhouse gas emissions compared to Portland cement.
- Due to its fineness and high void-filling effect, the product offers advantages in grout mortar and ground improvement applications.
- All common concrete additives (e.g., plasticizers, air-entraining agents, setting retarders) can be used with Çimsa Izo Power 42.5 cement.

2 AREAS OF APPLICATION

Several application areas for Çimsa Izo Power 42.5 Portland fly ash cement, suitable for general use, include:

- The product is well-suited for the production of ready-mixed concrete and construction chemicals.
- The product is suitable for manufacturing various reinforced concrete structures, such as residential buildings, bridges, foundations, viaducts, and concrete road pavements.

3 PRODUCTION

Stability takes center stage in Çimsa's production facilities, with product parameter variations minimized through controls implemented at every process stage, from raw materials to delivery. The production processes hold certifications compliant with EN ISO 9001, EN ISO 14001, EN ISO 50001, ISO 10002, and ISO 45001 standards.

4 CHEMICAL PROPERTIES

Properties	Çimsa Values (%)	Standart Limit (EN 197-1)	
		Min.	Max.
Insoluble Matter	4-6	-	5,0
SiO ₂	21-23	-	-
Al ₂ O ₃	6-7	-	-
Fe ₂ O ₃	2,5-3,5	-	-
CaO	58-61	-	-
MgO	2-3	-	-
SO ₃	2,8-3,6	-	4,0
Loss on Ignition	1,0-2,5	-	5,0
Na ₂ O	0,30-0,70	-	-
K ₂ O	0,80-1,10	-	-
Chloride (Cl)	0,01-0,03	-	0,10
Free CaO	0,80-1,20	-	-

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5 PHYSICAL AND MECHANICAL PROPERTIES

Properties	Çimsa Values	Standart Limit (EN 197-1)	
		Min.	Max.
Specific Gravity	3,09 gr/cm ³	-	-
Specific Surface (Blaine)	2700-3200 cm ² /gr	-	-
Initial Setting	180-220 Minutes	60	-
Final Setting	240-280 Minutes	-	-
Water	28-30%	-	-
Volume Constancy (Le Chatelier)	1,0 mm	-	10
0.045 mm Retained Material	2,5-4,5%	-	-
0.090 mm Retained Material	0,5%	-	-
2-Day Compressive Strength	28-32 MPa	20	-
28-Day Compressive Strength	48-52 MPa	42,5	62,5

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6 QUALITY CONTROL

Çimsa Izo Power 42.5 cement undergoes quality control in accordance with EN 197-1 standards. The product is available in both domestic and foreign markets with a CE certificate.

7 SAFETY INSTRUCTIONS

We adhere to standard safety requirements for general cements. For more detailed information, please refer to the safety data sheet for **Çimsa Izo Power 42.5** cement.

8 STORAGE CONDITIONS AND SHELF LIFE

Çimsa Izo Power 42.5 should be stored in dry and sheltered environments. This ensures the product retains its properties for a minimum of 6 months. Based on previous studies, the product has been observed to maintain its properties for over a year. Bagged products should not be stored for more than 3 months. It is advised not to stack more than 10 bags or 2 pallets on top of each other. The product must be stored in its original packaging, and the package should be tightly closed when not in use.