



1 GENERAL INFORMATION

Çimsa Izo Power 42.5 (CEM II/A-M (P-L) 42.5 R) Portland composite cement comprises solely Portland cement clinker, pozzolan, ground limestone and gypsum, following the TS EN 197-1:2011 standard.

Advantages in applications;

- Thanks to the pozzolans in its components;
- 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 mortars and ground improvement applications.
- The product provides the advantage of lower heat of hydration, especially for mass concrete and hot weather applications, compared to Portland cement.
- The product reduces micro-porosity in concrete, ensuring impermeability and long-term durability.
- 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 composite cement, suitable for general use, include:

- Provides higher resistance against environmental effects for concrete used in industrial flooring, dams and water channels, and coastal and port structures.
- Suitable for all types of constructions such as residential buildings, bridges, foundations, viaducts, jet grout applications, as well as for the production of construction chemicals.

3 PRODUCTION

Stability takes center stage in Cimsa'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

Features	Çimsa Values (%)	Standard Limits (EN 197-1)	
		Min	Max
Insoluble Residue	5 - 12	-	-
SiO ₂	20.5 - 24.0	-	-
Al ₂ O ₃	5.5 - 7.5	-	-
Fe ₂ O ₃	2.6 - 3.6	-	-
CaO	54.5 - 59.5	-	-
MgO	2.2 - 2.8	-	-
SO ₃	3.0 - 4.0	-	4,0
Loss on Ignition	1.5 - 4.5	-	-
Na ₂ O	0.15 - 0.55	-	-
K ₂ O	0.9 - 1.2	-	-
Chloride (Cl)	0.0070 - 0.0180	-	0,10
Free CaO	0.8 - 2.0	-	-

5 PHYSICAL PROPERTIES

Properties	Çimsa Values	Standart Limiti (EN 197-1)	
		Min	Max
Specific Gravity	3,04 gr/cm ³	-	-
Specific Surface (Blaine)	3200-3900 cm ² /gr	-	-
Initial Setting	180-280 min	60	-
Final Setting	230 - 360 min	-	-
Water	26.5-28.5 %	-	-
Volume Constancy (Le Chatelier)	1,0 mm	-	10
0.045 mm Retained Material	2.5-5.5 %	-	-
2-Day Compressive Strength	23-33 MPa	20	-
28-Day Compressive Strength	47-55 MPa	42,5	62,5

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.