



1 GENERAL INFORMATION

Çimsa Izo Power 42.5 (CEM II/A-M (P-Q) 42.5 R) Portland composite cement comprises solely Portland cement clinker, pozzolan, natural calcined clay and gypsum, following the TS EN 197-1:2011 standard. Advantages in applications;

- Thanks to the natural pozzolan and natural calcined pozzolan in its components;
- Produced in line with all compressive strength classes, Çimsa Izo Power 42.5 Portland composite cement demonstrates equivalent strength performance to Portland cement (CEM I 42.5 R) in concrete production.
- 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 composite cement, suitable for general use, include:

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

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	10.5	-	-
SiO ₂	23.5	-	-
Al ₂ O ₃	5.50	-	-
Fe ₂ O ₃	2.70	-	-
CaO	57.3	-	-
MgO	1.50	-	-
SO ₃	3.40	-	4.0
Loss On Ignition	4.40	-	-
Na ₂ O	0.35	-	-
K ₂ O	0.67	-	-
Chloride (Cl)	0.050	-	0.1
Free Lime	1.50	-	-

5 PHYSICAL AND MECHANICAL

Properties	Çimsa Values	Standart Limiti (EN 197-1)	
		Min	Max
Specific Gravity	g/cm ³ 3.04	-	-
Blaine	cm ² /g 4380	-	-
Vicat Initial Set	Minutes 170	60	-
Vicat Final Set	Minutes 220	-	-
Water Demand	27.0 %	-	-
Stability (Le chatelier)	mm 1	-	10
Residue at 45 microns	4.3 %	-	-
Compressive Strength 2 Days	MPa 27.0	20.0	-
Compressive Strength 7 Days	MPa 40.0	-	-
Compressive Strength 28 Days	MPa 52.0	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 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.

