



ÇİMSA

REGO



TAILOR-MADE SYNTHETIC AGGREGATE  
FOR OPTIMAL PERFORMANCE



Rego is a special aggregate produced from calcium aluminate cement clinker, with an adjustable particle size distribution that can be optimized to meet specific requirements. Its customizable structure makes Rego highly compatible with the entire Çimsa Calcium Aluminate Cement product family, especially the Recipro and Refro series.

Rego delivers superior performance in concrete and technical mortar applications, particularly in areas where high strength, chemical resistance, and thermal stability are essential. One of Rego's key advantages is its ability to adapt particle size distribution to customer needs, ensuring perfect rheology and homogeneity in formulations.

**REGO IS PRODUCED ACCORDING TO EN 14647 STANDARDS AND HAS THE FOLLOWING FEATURES.**



**Chemical Composition**

Al <sub>2</sub> O <sub>3</sub> (%)	CaO(%)	SiO <sub>2</sub> (%)	Fe <sub>2</sub> O <sub>3</sub> (%)
≥38,5	≤38,0	≤5,0	≤19,0

TiO <sub>2</sub> (%)	MgO (%)	SO <sub>3</sub> (%)	Na <sub>2</sub> Eq Alkali (%)	Cl-as ions (%)	S-as ions (%)
≤3,0	≤1,0	≤0,2	≤0,3	≤0,01	≤0,1

**Phase Composition**

Major Mineral Phase	: CA
Minor Mineral Phases	: C <sub>12</sub> A <sub>7</sub> , C <sub>4</sub> AF

**1250 °C**

Thermal resistance up to 1250 °C and ideal for demanding processes.

**OPT**

Provides an optimizable particle size distribution tailored to requirements and excellent rheology.

**pH 3**

Maintains its integrity down to pH 3 and provides high resistance to acidic environments.

**MAX**

Its dense structure ensures superior abrasion resistance and long-lasting performance.

**Recipro and Refro Series are stronger with Rego.**



# ADVANTAGES



## **HIGH ABRASION RESISTANCE**

Thanks to its dense and stable structure, Rego provides superior abrasion resistance in refractory and technical concrete applications. When used together with Çimsa Aluminate cements, the overall system durability is significantly enhanced.



## **RESISTANCE TO SULFATE ATTACKS**

In conventional Portland cement systems, sulfate attack occurs due to reactions between aluminates and sulfate ions, leading to expansion and cracking over time. This risk increases in environments exposed to seawater, groundwater, or chemicals. Rego contains no tricalcium aluminate phase, ensuring superior resistance to sulfate exposure.



## **HIGH DURABILITY**

Thanks to its advanced chemical and mineralogical structure, Rego provides high resistance to alkali-silica reactions, sulfate and acid attacks, high temperatures, and efflorescence when used as a single binder.



## **TAILOR MADE GRADATION**

Rego is a synthetic aggregate produced from 100% calcium aluminate cement clinker, offering customizable particle size distribution for perfect rheology. Its flexibility ensures compatibility with Çimsa's Refro and Recipro series, delivering superior performance in demanding applications.



## **RESISTANCE TO ACID**

Rego provides excellent resistance to acidic environments thanks to the inherent advantages of CAC technology. While Portland cement matrices begin to deteriorate below pH 7, Rego maintains its integrity down to pH 3. This feature ensures long-lasting performance in applications exposed to aggressive chemical conditions.



## **THERMAL RESISTANCE**

When used with suitable CAC cements, Rego offers thermal stability up to 1250 °C. This feature makes it ideal for monolithic refractory castables and high-temperature industrial processes.



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