



## PRODUCT DESCRIPTION

### CALCIUM ALUMINATE CEMENT

# GÓRKAL 50+

## GENERAL CHARACTERISTICS

**GÓRKAL 50+** is hydraulic binder for refractory and building applications. It is characterized by low  $\text{Fe}_2\text{O}_3$  content. Fast strength development and short setting time are advantages of **GÓRKAL 50+** cement. **GÓRKAL 50+** material is manufactured and controlled with respect to PN-EN 14647 norm.

## APPLICATION

Thanks to stable phase composition with perfect mechanical properties **GÓRKAL 50+** can be use in building chemistry mortars and concrete as well as part of refractory insulation pulps or other monolithic products.

## CHEMICAL COMPOSITION

**GÓRKAL 50+** principal components:

component	Typical values [%]
$\text{Al}_2\text{O}_3$	51 - 55
CaO	<38
$\text{SiO}_2$	<5
$\text{Fe}_2\text{O}_3$	<3

*The characteristics have been determined by classical analysis*

## MINERALOGICAL COMPOSITION

Principal phases: CA  
Secondary phase:  $\text{CA}_2$ ,  $\text{C}_4\text{AF}$ ,  $\text{C}_{12}\text{A}_7$ ,  $\text{C}_2\text{AS}$   
This information is just given as rough one.

## SPECIAL PROPERTIES

**GÓRKAL 50+** is characterised by some special features:

Specific surface acc. to Blaine	3000 - 3400 $\text{cm}^2/\text{g}$
Common refractoriness	$\geq 146$ sP
Density	3,0 $\text{g}/\text{cm}^3$
Bulk density	1,1 $\text{g}/\text{cm}^3$

## HYDRAULIC PROPERTIES

**GÓRKAL 50+** hydraulic properties:

	Typical values [minutes]
Initial setting time	>220
Final setting time	<600

*Determined acc. to EN-196-3*

## MECHANICAL PROPERTIES

**GÓRKAL 50+** is characterised by following mechanical strengths:

Cold Crushing Strength after 6h	>18 MPa
Cold Crushing Strength after 24h	>45 MPa

*The mixture composition is: 1350 g French sand  
500 g cement  
200 g water*

*Determined acc. to EN-196-1*

## SHELF LIFE

If stored properly, in dry conditions, the **GÓRKAL 50+** shelf-life can be 6 months from production date. Please contact Gorka Cement Development, Quality and Technology Department for details of storage.