

## Quality Certificate of cement

Type of cement : **CEM II/A-V 42,5R**

Requirements acc. to: **EN 197-1:2011**

Values obtained for the period of: **February 2023**

	Unit	Results	Requirements acc. to: EN 197-1:2011
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### 1. Properties (by standards)

Compressive strength			
Early strength, after 2 days	MPa	27,0	≥ 20
Standard strength, after 28 days <small>(results from previous month)</small>	MPa	55,9	≥ 42,5 i ≤ 62,5
Initial setting time	min	190	≥ 60
Expansion of cement	mm	0,5	≤ 10
Sulfate content (as SO <sub>3</sub> )	%	2,88	≤ 4,0
Chloride content Cl <sup>-</sup>	%	0,059	≤ 0,10
Loss on ignition <sup>a)</sup>	%	-	-
Insoluble residues <sup>a)</sup>	%	-	-

### 2. Additional information

Laser particle size distribution passing 8 μm/32 μm	%	35/78	-
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<sup>a)</sup>only for CEM I and CEM III

*Anna Kozłowska*

Kierownik Jakości

Cementownia Kujawy w Bielawach

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 stamp/signature