

Quality Certificate of cement

Type of cement : **CEM I 42,5R**

Requirements acc. to: EN 197-1:2011

Values obtained for the period of: **May 2022**

	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	28,3	≥ 20
Standard strength, after 28 days <small>(results from previous month)</small>	MPa	56,1	≥ 42,5 i ≤ 62,5
Initial setting time	min	160	≥ 60
Expansion of cement	mm	1,0	≤ 10
Sulfate content (as SO ₃)	%	3,27	≤ 4,0
Chloride content Cl ⁻	%	0,080	≤ 0,10
Loss on ignition ^{a)}	%	2,92	≤ 5,0
Insoluble residues ^{a)}	%	0,68	≤ 5,0

2. Additional information

Laser particle size distribution passing 8 μm/32 μm	%	29/75	-
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a) only for CEM I and CEM III

Anna Kozłowska

 Kierownik Jakości

Cementownia Kujawy w Bielawach

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 stamp/signature