

Lafarge Cement S.A.
ul. Warszawska 110
28-366 Małogoszcz
Cementownia Kujawy
Doradztwo Techniczne
www.lafarge.pl

tel.: (52) 58 65 000, fax: (52) 58 65 011
tel.: (41) 24 87 533, fax: (41) 24 87 531

KUJAWY CEMENT PLANT IN BIELAWY

Quality Certificate of cement

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

Requirements acc. to: EN 197-1:2011

Values obtained for the period of: **July 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	26,1	≥ 20
Standard strength, after 28 days (results from previous month)	MPa	56,3	$\geq 42,5$ i $\leq 62,5$
Initial setting time	min	166	≥ 60
Expansion of cement	mm	0,4	≤ 10
Sulfate content (as SO ₃)	%	3,33	$\leq 4,0$
Chloride content Cl ⁻	%	0,083	$\leq 0,10$
Loss on ignition ^{a)}	%	3,04	$\leq 5,0$
Insoluble residues ^{a)}	%	0,66	$\leq 5,0$

2. Additional information

Laser particle size distribution passing 8 µm/32 µm	%	31/73	-
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a) only for CEM I and CEM III

Anna Kozłowska

Kierownik Jakości
Kozłowska
Cementownia Kujawy w Bielawach

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stamp/signature