

## Quality Certificate of cement

Type of cement: **CEM III/A-M(S-LL)52,5N**

Requirements acc. to EN 197-1:2012

Values for the period of: **January 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	32,5	≥ 20
Standard strength, after 28 days <small>(results from previous month)</small>	MPa	60,8	≥ 52,5
Initial setting time	min	180	≥ 45
Expansion of cement	mm	0,5	≤ 10
Sulfate content (as SO <sub>3</sub> )	%	3,18	≤ 4,0
Chloride content Cl <sup>-</sup>	%	0,066	≤ 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	%	42/87	-
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<sup>a)</sup>only for CEM I i CEM III

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 Koordynator ds. jakości  
 Cementownia Kujawy w Bielawach  
  
 Maciej Wiczewski

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 stamp/signature