

TYPICAL CEMENT CERTIFICATE

Portland Cement type

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<u>Physical tests</u>	<u>Chemical analysis (%)</u>
<u>Time of Set Vicat (minutes)</u>	
<i>Initial</i> 120	<i>SiO₂</i> 19.1
<i>Final</i> 245	<i>Al₂O₃</i> 4.9
<u>Fineness</u>	<i>Fe₂O₃</i> 3.7
Specific surface	<i>CaO</i> 60.5
(Blaine) (m ² /kg) 386	Free calcium oxide 1.4
Retained on 45 µm sieve (%) 4	<i>MgO</i> 2.6
False set (%) 67	<i>SO₃</i> 3.8
Autoclave expansion (%) 0.12	Loss on ignition 1.9
Air content (%) 7	Insoluble residue 0.4
Compressive strength (MPa [psi])	Alkalies
3 days 26.2 [3800]	(Na ₂ O equivalent) 0.92
7 days 30.7 [4450]	Carbon dioxide (CO₂) 1.7
28 days 37.5 [5440]	Limestone 4.5
Expansion of mortar bars at 14 days (%) 0.014	Calcium carbonate (CaCO₃) in limestone 84
	Mineralogical Composition (Potential)
	C ₃ S 48
	C ₂ S 17
	C ₃ A 7
	C ₄ AF 11
	Sum C₃S + 4.75 C₃A 79

We hereby certify that the cement delivered complies with the ASTM Standard C 150 and AASHTO M 85, Type II.

For any information regarding this certificate, please contact our technical service at (418) 329-2100, ext. 3276.

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