



Cement Mill Test Report

Date of Issue: September 25, 2024

Plant: Exshaw AB
 Product: OneCem / IL(12)
 Mill Test Report Number: ESW_Type IL12 2024-8
 Manufactured during the month of: August 2024

CHEMICAL ANALYSIS

Item	Spec limit	Test Result
Rapid Method, X-Ray (C114)		
SiO ₂ (%)		17.5
Al ₂ O ₃ (%)		3.7
Fe ₂ O ₃ (%)		3.1
CaO (%)		60.2
MgO (%)		4.4
SO ₃ (%)	3.0 max*	3.5
K ₂ O (%)		0.51
Na ₂ O (%)		0.16
NaEq (%)		0.49
Loss on Ignition @ 950 (%)	10.0 max	6.6
Loss on Ignition @ 550 (%)		0.9
Inorganic Process Addition (Lafarge Cement Kiln Dust)	5.0 max	-
Adjusted Potential Phase Composition (C 150 - For information only)		
C ₃ S (%)	---	50
C ₂ S (%)	---	11
C ₃ A (%)	---	4
C ₄ AF (%)	---	9

PHYSICAL ANALYSIS

Item	Spec limit	Test Result
Blaine Fineness (m ² /kg) (C204)		527
Passing 45 µm (%) (C430)		99.5
Air Content (%) (C186)	12 max	6
Compressive Strength (MPa [psi]) (C109)		
1 day		17.6 [2546]
3 days	13.0 [1890] min	29.4 [4264]
7 days	20.0 [2900] min	35.0 [5079]
28 days (Previous Month Results)	25.0 [3620] min	43.6 [6329]
Time of setting (minutes) (C191)		
Vicat Initial	45 min.	102
ASTM C1012 Expansion % ***		
6 Months	0.10 max (MS) 0.05 max (HS)	0.082
12 Months	0.10 max (HS)	0.120
Mortar Bar Expansion (%) (C1038)	0.020 max	0.003

* May exceed the SO₃ maximum based on C1038 results of <0.020% expansion at 14 days.

*** Performed by Lafarge Edmonton and/or Seattle Labs

We certify that the above described cement, at the time of shipment, meets the chemical and physical requirements of ASTM C595/C595M-23 & AASHTO M 240-23 STANDARD SPECIFICATIONS FOR TYPE IL (12) and (MS) CEMENT.

Exceptions: ASTM C430 is not within the current Scope of Accreditation.

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Certified to NSF/ANSI/CAN 61

AASHTO ACCREDITED

Certified By:

John W Blair
 Quality Manager