



Cement Mill Test Report

Date of Issue: January 9, 2026

Plant: Exshaw AB
Product: Portland Cement Type I/II
Mill Test Report Number: ESW_Type I-II 2025-12
Manufactured during the month of: December 2025

ASTM C 150-24 and AASHTO M 85-24 Standard Requirements

CHEMICAL ANALYSIS			PHYSICAL ANALYSIS		
Item	Spec limit	Test Result	Item	Spec limit	Test Result
Rapid Method, X-Ray (C114)			Air content of mortar (%) (C185)	12 max	6
SiO ₂ (%)	---	19.1	Blaine Fineness (m ² /kg) (C204)	260 min	407.80
Al ₂ O ₃ (%)	6.0 max	4.0	Passing 45 µm (%) (C430)	---	98.6
Fe ₂ O ₃ (%)	6.0 max	3.3	Compressive strength (MPa, [psi]) (C 109)		
CaO (%)	---	62.0	3 days	12.0 [1740] min	30.6 [4,430]
MgO (%)	6.0 max	4.8	7 days	19.0 [2760] min	36.7 [5,324]
SO ₃ (%)*	3.0 max *	3.4	28 days (Previous Month's Result)		45.2 [6,552]
Loss on Ignition (%)	3.5 max	2.5	Time of setting (minutes)		
Insoluble Residue (%)	1.5 max	0.3	Vicat Initial (C191)	45 - 375	93
CO ₂ (%)	---	1.7	Mortar Bar Expansion (%) (C1038)**	0.020 max	0.017
Limestone (%)	5.0 max	4.0	Specific Gravity (For Information Purposes Only)		3.15
CaCO ₃ in Limestone (%)	70 min	88			
Inorganic Process Addition (Cement Kiln Dust)	5.0 max	0.5			
Adjusted Potential Phase Composition (C50)					
C ₃ S (%)	---	45			
C ₂ S (%)	---	9			
C ₃ A (%)	8 max	4			
C ₄ AF (%)	---	8			
C ₃ S+4.75*C ₃ A (%)	100 max	64			

ASTM C 150-17 and AASHTO M 85-17 Optional Requirements:

Na ₂ O _{eq}	0.60 max	0.55	False set (%) (C451)	50 min	84
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* May exceed the SO₃ maximum based on C 1038 results of <0.020% expansion at 14 days.

We certify that the above described cement, at the time of shipment, meets the chemical and physical requirements of:

ASTM C 150-24 & AASHTO M 85-24 STANDARD SPECIFICATIONS FOR TYPES I / II CEMENTS; and

ASTM C 150-24 & AASHTO M 85-24 OPTIONAL CHEMICAL REQUIREMENTS FOR TYPES I / II LOW ALKALI CEMENT.

AASHTO Accrediation Exceptions: C430 sand C191

Western Canada BU - Exshaw Plant
P.O. Box 160, Highway 1A, Exshaw AB, T0L 2C0
Phone: 403-673-3815

Certified By:


John W Blair
Quality Manager



Certified to
NSF/ANSI/CAN 61



AASHTO
ACCREDITED



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Additional Data

Item	Test Result	
	Limestone	Inorganic Process Addition Lafarge Cement Kiln Dust
Amount (%)	4.0	0.5
SiO ₂ (%)	1.6	14.5
Al ₂ O ₃ (%)	0.5	3.5
Fe ₂ O ₃ (%)	0.2	2.2
CaO (%)	49.2	51.7
SO ₃ (%)	0.2	2.7
CO ₂ (%)	42.6	n/a

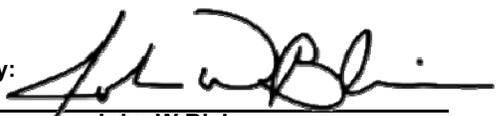
Base Cement Phase Composition

Item	Test Result
C ₃ S (%)	47
C ₂ S (%)	10
C ₃ A (%)	4
C ₄ AF (%)	8

We certify that the data above reflects the materials used in cement manufacture during the production period indicated.

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