



## Cement Mill Test Report

Date of Issue: December 8, 2025

Plant: Exshaw, AB  
Product: Portland Cement Type III  
Mill Test Report Number: ESW\_Type III 2025-11  
Manufactured during the month of: November 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 (XRF) (C114)			Air content of mortar (%) (C185)	12 max	6
SiO <sub>2</sub> (%)	---	19.1	Blaine Fineness (m <sup>2</sup> /kg) (C204)	---	523
Al <sub>2</sub> O <sub>3</sub> (%)	---	4.1	Passing 45 µm (%) (C430)	---	99.1
Fe <sub>2</sub> O <sub>3</sub> (%)	---	3.4	Compressive strength (MPa, [psi]) (C109)		
CaO (%)	---	61.5	1 day	12.0 [1740] min	23.5 [3,403]
MgO (%)	6.0 max	4.8	3 days	24.0 [3480] min	33.6 [4,869]
SO <sub>3</sub> (%) **	3.5 max	3.5	28 days <u>(Previous Month's Result)</u>		50.3 [7,291]
Loss on Ignition (%)	3.5 max	2.4	Time of setting (minutes)		
Insoluble Residue (%)	1.5 max	0.3	Vicat Initial (C191)	45 - 375	75
CO <sub>2</sub> (%)	---	1.7	Mortar Bar Expansion (%) (C1038)	0.020 max	0.013
Limestone (%)	5.0 max	3.9			
CaCO <sub>3</sub> in Limestone (%)	70 min	88			
Inorganic Process Addition (Lafarge Cement Kiln Dust)	5.0 max	0.5			
Adjusted Potential Phase Composition (C150)					
C <sub>3</sub> S (%)	---	56			
C <sub>2</sub> S (%)	---	13			
C <sub>3</sub> A (%)	15 max	5			
C <sub>4</sub> AF (%)	---	10			

#### ASTM C 150-24 and AASHTO M 85-24 Optional Chemical Requirements:

Na<sub>2</sub>Oeq (%) Weekly Averages: Week 1 0.57 Week 2 0.62 Week 3 0.56 Week 4 0.54 Max 0.60

\*\* May exceed 3.0% SO<sub>3</sub> maximum based on C1038 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 TYPE III CEMENT; and

ASTM C 150-24 & AASHTO M 85-24 OPTIONAL CHEMICAL REQUIREMENTS FOR TYPE III LOW ALKALI CEMENT.

Exceptions: C430 and C191 are excluded from the scope of the AASHTO accreditation.

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





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#### Additional Data

Item	Test Result	
	Limestone	Inorganic Process Addition Lafarge Cement Kiln Dust
Amount (%)		0.5
SiO <sub>2</sub> (%)	1.8	14.4
Al <sub>2</sub> O <sub>3</sub> (%)	0.6	3.5
Fe <sub>2</sub> O <sub>3</sub> (%)	0.2	2.2
CaO (%)	49.4	50.4
SO <sub>3</sub> (%)	0.2	2.5
CO <sub>2</sub> (%)	42.4	n/a

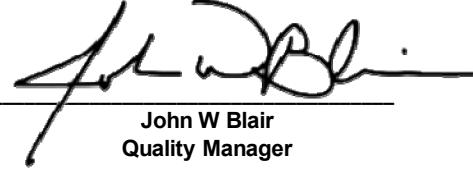
#### Base Cement Phase Composition

Item	Test Result
C <sub>3</sub> S (%)	58
C <sub>2</sub> S (%)	13
C <sub>3</sub> A (%)	5
C <sub>4</sub> AF (%)	11

Specific Gravity (For Information Purposes Only) 3.15

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

Certified By:



John W Blair  
Quality Manager

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