



# Cement Mill Test Report

Date of Issue: July 16, 2025

Plant: Exshaw, AB  
Product: Portland Cement Type III  
Mill Test Report Number: ESW\_Type III 2025-06  
Manufactured during the month of: June 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)		
SiO <sub>2</sub> (%)	---	19.2		12 max	7
Al <sub>2</sub> O <sub>3</sub> (%)	---	4.0	Blaine Fineness (m <sup>2</sup> /kg) (C204)		
Fe <sub>2</sub> O <sub>3</sub> (%)	---	3.4		---	492
CaO (%)	---	61.4	Passing 45 µm (%) (C430)		
MgO (%)	6.0 max	4.6		---	99.5
SO <sub>3</sub> (%) **	3.5 max	3.5	Compressive strength (MPa, [psi]) (C109)		
Loss on Ignition (%)	3.5 max	2.8	1 day	12.0 [1740] min	20.9 [3023]
Insoluble Residue (%)	1.5 max	0.4	3 days	24.0 [3480] min	29.9 [4337]
CO <sub>2</sub> (%)	---	1.9	28 days (Previous Month's Result)		46.3 [6714]
Limestone (%)	5.0 max	4.5	Time of setting (minutes)		
CaCO <sub>3</sub> in Limestone (%)	70 min	97.0	Vicat Initial (C191)	45 - 375	86
Inorganic Process Addition (Lafarge Cement Kiln Dust)	5.0 max	0.5	Mortar Bar Expansion (%) (C1038)		
Adjusted Potential Phase Composition (C150)				0.020 max	0.011
C <sub>3</sub> S (%)	---	55			
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 0.58 Week 3 0.58 Week 4 0.58 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 is 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





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#### Additional Data

Item	Test Result	
	Limestone	Inorganic Process Addition Lafarge Cement Kiln Dust
Amount (%)	4.5	--
SiO <sub>2</sub> (%)	2.2	14.2
Al <sub>2</sub> O <sub>3</sub> (%)	0.5	3.6
Fe <sub>2</sub> O <sub>3</sub> (%)	0.5	2.1
CaO (%)	49.0	48.7
SO <sub>3</sub> (%)	0.3	2.2
CO <sub>2</sub> (%)	42.4	n/a

#### Base Cement Phase Composition

Item	Test Result
C <sub>3</sub> S (%)	57
C <sub>2</sub> S (%)	14
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.

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