



## Cement Mill Test Report

Date of Issue: September 9, 2026

Plant: Exshaw, AB  
Product: Portland Cement Type III  
Mill Test Report Number: ESW\_Type III 2026-08  
Manufactured during the month of: August 2026

### 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> (%)               | ---        | 3.5         |                                                  | ---             | 522          |
| CaO (%)                                          | ---        | 61.7        | Passing 45 µm (%) (C430)                         |                 |              |
| MgO (%)                                          | 6.0 max    | 4.4         |                                                  | ---             | 99.6         |
| SO <sub>3</sub> (%) **                           | 3.5 max    | 3.6         | Compressive strength (MPa, [psi]) (C109)         |                 |              |
| Loss on Ignition (%)                             | 3.5 max    | 2.5         | 1 day                                            | 12.0 [1740] min | 24.7 [3,576] |
| Insoluble Residue (%)                            | 1.5 max    | 0.3         | 3 days                                           | 24.0 [3480] min | 34.4 [4,992] |
| CO <sub>2</sub> (%)                              | ---        | 1.8         | 28 days (Previous Month's Result)                |                 | 49.1 [7,123] |
| Limestone (%)                                    | 5.0 max    | 4.3         | Time of setting (minutes)                        |                 |              |
| CaCO <sub>3</sub> in Limestone (%)               | 70 min     | 88          | Vicat Initial (C191)                             | 45 - 375        | 83           |
| Inorganic Process Addition<br>(Cement Kiln Dust) | 5.0 max    | --          | Mortar Bar Expansion (%) (C1038)                 |                 |              |
| Adjusted Potential Phase Composition (C150)      |            |             |                                                  | 0.020 max       | 0.012        |
| C <sub>3</sub> S (%)                             | ---        | 56          | Specific Gravity (For Information Purposes Only) |                 |              |
| C <sub>2</sub> S (%)                             | ---        | 13          |                                                  |                 | 3.15         |
| C <sub>3</sub> A (%)                             | 15 max     | 5           |                                                  |                 |              |
| C <sub>4</sub> AF (%)                            | ---        | 11          |                                                  |                 |              |

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

|                                          |        |      |        |        |      |        |      |     |      |
|------------------------------------------|--------|------|--------|--------|------|--------|------|-----|------|
| Na <sub>2</sub> Oeq (%) Weekly Averages: | Week 1 | 0.52 | Week 2 | Week 3 | 0.54 | Week 4 | 0.53 | 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

Our Exshaw Cement Plant proudly produces cement that qualifies as a Product of Canada, supporting domestic supply.



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#### Additional Data

| Item                               | Test Result |                                                        |
|------------------------------------|-------------|--------------------------------------------------------|
|                                    | Limestone   | Inorganic Process Addition<br>Lafarge Cement Kiln Dust |
| Amount (%)                         |             | --                                                     |
| SiO <sub>2</sub> (%)               | 2.0         | 15.5                                                   |
| Al <sub>2</sub> O <sub>3</sub> (%) | 0.5         | 3.6                                                    |
| Fe <sub>2</sub> O <sub>3</sub> (%) | 0.3         | 2.5                                                    |
| CaO (%)                            | 49.1        | 54.9                                                   |
| SO <sub>3</sub> (%)                | 0.2         | 2.4                                                    |
| CO <sub>2</sub> (%)                | 42.5        | n/a                                                    |

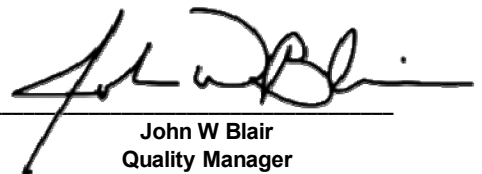
#### Base Cement Phase Composition

| 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          |

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

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