



## Cement Test Report

Mill Test Report Number: SEA\_NEWCEM\_January\_2025

YEAR: 2024

MONTH OF PRODUCTION: December

PLANT: Seattle

CEMENT TYPE: NewCem Grade 100

### Reference Cement

<b>Fineness by Air Permeability</b> (m <sup>2</sup> /kg; ASTM C204)	434		
<b>Fineness by 45 µm (No. 325) Sieve</b> (% retain; ASTM C430)	2.4		
<b>Compressive Strength</b> (ASTM C109/C109 M)		<b>psi</b>	<b>Min Limit</b>
7-day	4,730		-
28-day	5,900		5,000
<b>Total Alkalies (Na<sub>2</sub>O + 0.658 K<sub>2</sub>O)</b> (%, ASTM C114)	<b>Actual</b> 0.86		<b>Limits</b> 0.6-0.9

### Slag

<b>Fineness by Air Permeability</b> (m <sup>2</sup> /kg; ASTM C204)	559		
<b>Fineness by 45 µm (No. 325) Sieve</b> (% retain; ASTM C430)	3.7		
<b>Compressive Strength</b> (ASTM C109/C109 M)		<b>SAI</b>	<b>SAI Limit</b>
28-day (Previous Month)		<b>Min</b>	
	102		95
<b>Specific Gravity</b> (Mg/m <sup>3</sup> ; ASTM C188)	2.86		
<b>Air Content of Mortar</b> (%, ASTM C185)	<b>Actual</b> 5		<b>Max Limit</b> 12
<b>Sulfide Sulfur</b> (% S, ASTM C114)	0.8		2.5
<b>Sulfate Ion</b> (% as SO <sub>3</sub> , ASTM C114)	6.4		A
<b>Sulfate Expansion</b> (% Expansion, ASTM C1038, CSA C5)	0.003		0.020
<b>Color Value L*</b>	77.6		

### Slag

<b>CHEMICAL ANALYSIS</b>	<b>Percent</b>
Silica Dioxide (SiO <sub>2</sub> ; ASTM C114)	32.2
Ferric Oxide (Fe <sub>2</sub> O <sub>3</sub> ; ASTM C114)	1.3
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> ; ASTM C114)	12.5
Calcium Oxide (CaO; ASTM C114)	40.7
Sulfur Trioxide (SO <sub>3</sub> ; ASTM C114)	7.2
Magnesium Oxide (MgO; ASTM C114)	4.5
Loss on Ignition (L.O.I.; ASTM C114)	2.43
Total Alkalies	0.72
Inorganic Process Addition	9.6

<sup>A</sup> Not Applicable.

The ground granulated blast furnace slag complies with the current specification of the chemical physical requirement of ASTM C-989, AASHTO M-302 for grade 100 Ground Granulated Blast Furnace Slag (GGBFS) and and CSA A3001 Slag.

Slag source is JFE Mineral Company in Kurashiki City, Japan. NewCem is ground and manufactured in Seattle, WA.



Certified to  
NSF/ANSI/CAN 61

Certified by:

Rob Shogren  
Technical Director

December 26, 2024