



Certified to
NSF/ANSI/CAN 61

Cement Mill Test Report

Month of Issue: APRIL 2023

Plant: **Richmond, British Columbia**
 Product: **OneCem**
 Mill Test Report #: **R-TIL-23-04**
 Manufactured: **MARCH 2023**

ASTM C595 - 21 Standard Requirements

CHEMICAL ANALYSIS			PHYSICAL ANALYSIS		
Item	Spec limit	Test Result	Item	Spec limit	Test Result
Rapid Method, X-Ray (C 114)			Air content of mortar (%) (C 185)	12 max	6.7
SiO ₂ (%)	---	20.6	Blaine Fineness (m ² /kg) (C 204)	---	437
Al ₂ O ₃ (%)	---	4.9	Passing 325 (%) (C 430)	---	99.2
Fe ₂ O ₃ (%)	---	3.4	Autoclave expansion (%) (C 151)	[-0.2 - 0.8]	0.03
CaO (%)	---	64.4	Compressive strength (Mpa [PSI]) (C 109)		
MgO (%)	---	0.8			
SO ₃ (%)	3.0 max*	2.8			
Loss on ignition @ 950 (%)	10.0 max	2.3			
NaEq (Alkali) (%)	---	0.54			
Insoluble residue (%)	---	0.68			
Adjusted Potential Phase Composition***					
C3S (%)	---	53	3 days	13.0 [1890] min	32.0 4640
C2S (%)	---	19	7 days	20.0 [2900] min	41.4 6000
C3A (%)	---	7	28 days (Reflects previous month's data)	25.0 [3620] min	49.7 7210
C4AF (%)	---	10	Time of setting (minutes)		
			Vicat Initial (C 191)	45-420	78
			Mortar Bar Expansion (C 1038)*		
			14 days, % max	0.020 max	0.001
			Cement Density (C186)		3.09
Sulphate Resistance C1012 (Q3/2021)		0.091			

* May exceed 3.0% SO₃ maximum based on our C 1038 results of <0.02% expansion at 14 days.

***Corrected by using ASTM calculation for Limestone Cement

We certify that the above described cement, at the time of shipment, meets the chemical and physical requirements of:
 ASTM C 595-21 & AASHTO M 240-21 STANDARD SPECIFICATIONS FOR TYPE IL(15), TYPE IL(15) MS CEMENT

Cement complies with NSF 61

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Certified By:

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 4/3/2023