

Cement Mill Test Report

Month of Issue: July 2024

Plant: **Richmond, British Columbia**
 Product: **Portland Cement Type GUL / MSL**
 Mill Test Report #: **R-GUL-24-07**
 Manufactured: **June 2024**

CSA A3000:23 Standard Requirements

CHEMICAL ANALYSIS			PHYSICAL ANALYSIS		
Item	Spec limit	Test Result	Item	Spec limit	Test Result
Rapid Method, X-Ray			Air content of mortar (%) (C 185)	---	6.4
SiO ₂ (%)	---	18.5	Blaine Fineness (m ² /kg)	---	436
Al ₂ O ₃ (%)	---	4.6	Passing 45 um (%)	72 min	98.9
Fe ₂ O ₃ (%)	---	2.9	Compressive strength (MPa)		
CaO (%)	---	62.8	3 days	14.5 min	27.9
MgO (%)	---	0.9	7 days	20.0 min	35.5
SO ₃ (%)	3.0 max*	2.7	28 days (Reflects previous month's data)	26.5 min	44.8
Loss on ignition @ 950 (%)	10.0 max	6.8	Time of setting (minutes)		
Insoluble residue (%)	---	0.32	Vicat Initial	45-375	113
Free Lime (%)	---	1.1	Sulphate Resistance (C6)	0.05	0.03
Inorganic Process Addition (%)		3	Colour (L*)	---	64
Potential Phase Composition*			Cement Density		3.09
C3S (%)	---	72			
C2S (%)	---	22			
C3A (%)	---	7			
C4AF (%)	---	9			
CSA A3000:23 Optional Chemical Requirements:					
NaEq (Alkali) (%)		0.45			

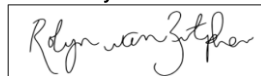
*Corrected by using ASTM Calculation for Limestone Cement

We certify that the above described cement, at the time of shipment, meets the chemical and physical requirements of applicable specifications for Type GUL / MSL
 CSA A3000:23 STANDARD SPECIFICATIONS FOR TYPE GUL / MSL CEMENT;
 Cement complies with NSF 61

Western BU - Richmond
 7611 No 9 Rd Richmond, BC
 604 244 4300

Questions or enquiries can be directed to Paul Deram
 Paul Deram
 Lafarge - Technical Services Engineer
 7591 #9 Road, Richmond, BC, V6W 0A6 Canada
 C +1 604 690 8872
 E paul.deram@lafarge.com

Certified By:



Robyn van Zutphen
 Quality Manager
 7/12/2024