



Cement

TS100 - Natural Pozzolan TEST REPORT

Analysis by: Lafarge Seattle
Sample from : Kamloops Grinding Plant
Average Analysis: December 2021
Test Report Number 1-22 Natural Pozzolan

Chemical Analysis

		Limits
Silicon Dioxide (SiO ₂)	62.5 %	
Aluminum Oxide (Al ₂ O ₃)	18.0 %	
Iron Oxide (Fe ₂ O ₃)	6.3 %	
Total (SiO ₂) + (Al ₂ O ₃) + (Fe ₂ O ₃)	86.8 %	70% Min - ASTM
Sulphur Trioxide (SO ₃)	0.1 %	4% Max - ASTM
Calcium Oxide (CaO)	6.8 %	
Magnesium Oxide	2.2 %	
Moisture Content	1.13 %	3% Max - ASTM
Loss on Ignition	2.73 %	10% Max
Available Alkalies as Equivalent Na ₂ O	0.35 %	1.5% Max
Total Alkalies as Equivalent Na ₂ O	3.13 %	

Physical Analysis

Fineness Retained on 45 um (No. 325 Sieve)	8.2 %	34% Max - ASTM
Strength Activity Index with Portland Cement		
% of Control at 7 Days	90 %	75% Min - ASTM
% of Control at 28 Days (<i>previous month's result</i>)	99 %	75% Min - ASTM
Water Requirement, Percent of Control	105 %	115% Max- ASTM
Autoclave Expansion	-0.02 %	0.8% Max - ASTM
Density	2.57 g/cm ³	

Uniformity Requirements

Density, Variation from Average	0.00 %	5% Max - ASTM
Fineness 45um Sieve, Variation from Average	0.25 %	5% Max - ASTM

We hereby certify that the composite natural pozzolan sample above meets the chemical and physical requirements of CAN/CSA A3001 for Type N and ASTM C-618 Class N.

Certified : Robert S. Sheggen

WESTERN REGION

5400 West Marginal Way SW, Seattle, Washington 98106-1517
Office: 206.923.0098 or 800.477.0100 Fax: 206.923.0388