



Cement

TS100 - Natural Pozzolan TEST REPORT

Analysis by: Lafarge Seattle
Sample from : Kamloops Grinding Plant
Average Analysis: May 2022
Test Report Number 6-22 Natural Pozzolan

Chemical Analysis

| | | Limits |
|---|--------|----------------|
| Silicon Dioxide (SiO ₂) | 59.8 % | |
| Aluminum Oxide (Al ₂ O ₃) | 15.9 % | |
| Iron Oxide (Fe ₂ O ₃) | 6.4 % | |
| Total (SiO ₂) + (Al ₂ O ₃) + (Fe ₂ O ₃) | 82.1 % | 70% Min - ASTM |
| Sulphur Trioxide (SO ₃) | 0.0 % | 4% Max - ASTM |
| Calcium Oxide (CaO) | 4.4 % | |
| Magnesium Oxide | 2.4 % | |
| Moisture Content | 0.50 % | 3% Max - ASTM |
| Loss on Ignition | 6.40 % | 10% Max |
| Available Alkalies as Equivalent Na ₂ O | 0.50 % | 1.5% Max |
| Total Alkalies as Equivalent Na ₂ O | 3.40 % | |

Physical Analysis

| | | |
|--|------------------------|-----------------|
| Fineness Retained on 45 um (No. 325 Sieve) | 8.6 % | 34% Max - ASTM |
| Strength Activity Index with Portland Cement | | |
| % of Control at 7 Days | 83 % | 75% Min - ASTM |
| % of Control at 28 Days (<i>previous month's result</i>) | 84 % | 75% Min - ASTM |
| Water Requirement, Percent of Control | 105 % | 115% Max- ASTM |
| Autoclave Expansion | 0.00 % | 0.8% Max - ASTM |
| Density | 2.58 g/cm ³ | |

Uniformity Requirements

| | | |
|---|--------|---------------|
| Density, Variation from Average | 0.10 % | 5% Max - ASTM |
| Fineness 45um Sieve, Variation from Average | 4.10 % | 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. Shogren

WESTERN REGION

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