



FLY ASH TEST REPORT

Sample from : Sundance Harvested Fly Ash
Average Analysis: December 2025
Test Report Number Sundance_HA-1-26_F_CSA

Chemical Analysis

| | |
|---|---------------|
| Silicon Dioxide (SiO ₂) | 60.0 % |
| Aluminum Oxide (Al ₂ O ₃) | 23.1 % |
| Iron Oxide (Fe ₂ O ₃) | 3.6 % |
| Total (SiO ₂) + (Al ₂ O ₃) + (Fe ₂ O ₃) | 86.7 % |
| Sulphur Trioxide (SO ₃) | 0.3 % |
| Calcium Oxide (CaO) | 8.4 % |
| Magnesium Oxide | 0.8 % |
| Moisture Content | 0.14 % |
| Loss on Ignition | 2.22 % |
| Total Alkalies as Equivalent Na ₂ O | 2.39 % |

Physical Analysis

| | |
|--|-------------------------------|
| Fineness Retained on 45 um (No. 325 Sieve) | 13.2 % |
| Fineness Retained on 160 um | 0.1 |
| Quality of Air Entrainment | 1.0 % |
| Strength Activity Index with Portland Cement | |
| % of Control at 28 Days (<i>previous month's result</i>) | 89 % |
| Water Requirement, Percent of Control | 100 % |
| Density | 2.31 g/cm ³ |
| Density, Variation from Average | 1.60 % |
| Fineness 45um Sieve, Variation from Average | 2.10 % |

We hereby certify that the composite fly ash sample above meets the chemical, physical and testing frequency requirements of CAN/CSA A3001 for Type F Fly Ash.

* Tested at CCIL, ASTM C1077 and AASHTO R18 Accredited Laboratory

A handwritten signature in black ink that reads "Rob Shogren".

Rob Shogren, P.Eng, Ph.D.
Technical Director
Amrize