

ASTM C618-25a - Chemical and Physical Analyses - Coal Ash/Pozzolans

CTL Ticket: 26032	Plant of Origin: Ogden Terminal	Sample Date Range: 02/01/2026
CTL Project: CT17328	Sample Type: Fly Ash	to:
Report Date: 04/13/2026	Sample ID: Ogden	Date Received: 03/04/2026
	Supplier: Bridgesource	

Chemical Composition (%) (by Wyoming Analytical Laboratories, Inc.)		ASTM C618-25a		
		Class N	Class F	Class C
Silicon Dioxide:	61.9			
Aluminum Oxide:	15.3			
Iron Oxide:	5.8			
Total Silica, Aluminum, Iron:	82.9	≥70.0%	≥50.0%	≥50.0
Sulfur Trioxide:	1.4	≤4.0%	≤5.0%	≤5.0%
Calcium Oxide:	6.5	N/A	≤18.0%	>18.0%
Magnesium Oxide:	2.35	N/A	N/A	N/A
Total Alkalis, as Na ₂ O:	4.37			
Sodium:	3.41	Product Class: Class F		
Potassium:	1.46	Conforms to Class: Yes		

Volatile Composition (Mass%)				
Moisture Content:	0.1	≤3.0%	≤3.0%	≤3.0%
Loss on Ignition:	0.4	≤10.0%	≤6.0%	≤6.0%

Physical Test Results				
Fineness, Retained on #325 Sieve (%):	24.7	≤34%	≤34%	≤34%
Fineness, Retained on #100 Sieve (%)*:			≤10%	≤10%
*(Harvested ash bottom ash blends only)				
Strength Activity Index (%) *		* No 7-day limit if 28-day meets		
Percent of Control @ 7 Days:	79	≥75%	≥75%	≥75%
Percent of Control @ 28 Days:	86	≥75%	≥75%	≥75%
Water Requirement, % of Control:	96	≤115%	≤105%	≤105%
Soundness, Autoclave Expansion (%):	0.00	≤0.8%	≤0.8%	≤0.8%
Density (g/cm ³):	2.42	N/A	N/A	N/A

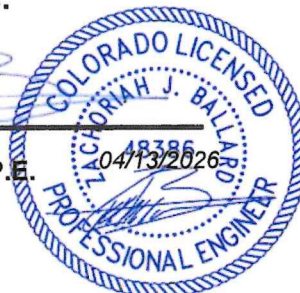
Uniformity				
Established from 10 previous tests				
Average Fineness:	22.5	Difference 2.2(%)	±5(%)	±5(%)
Average Density:	2.42	Difference 0%	±5%	±5%

Supplementary Requirements				
Available Alkalis, as Na ₂ O	2.23%			
Sodium Oxide:	1.78%	Drying Shrinkage %: 0.00	≤0.03	≤0.03
Potassium Oxide:	0.68%			

Comments: Meets ASTM C618-25 and AASHTO M295-25.

CTL | Thompson, Inc.

Zachariah J. Ballard, MCE, P.E.



March 16, 2026


Dennis Jonsrud
CTL Thompson, Materials Engineers, Inc.
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Request #: 46014 Date Received: 3/9/2026
WAL Sample #: U4229 Sample Matrix: fly ash
Customer Sample ID: Bridgesource Ogden 2-1-26 CT 17328.000 CTL 26032
PO#:
Project#:

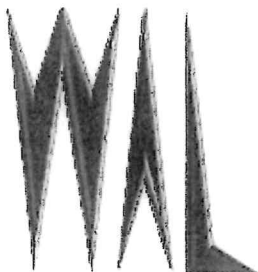
CHEMICAL ANALYSIS
WT%, DRY BASIS

Silicon Dioxide, SiO ₂	61.89
Aluminum Oxide, Al ₂ O ₃	15.26
Iron Oxide, Fe ₂ O ₃	5.76
Total (SiO ₂ + Al ₂ O ₃ + Fe ₂ O ₃)	82.91
Calcium Oxide, CaO	6.48
Magnesium Oxide, MgO	2.35
Sodium Oxide, Na ₂ O	3.41
Potassium Oxide, K ₂ O	1.46
Total Alkalies as Na ₂ O	4.37
Titanium Dioxide, TiO ₂	0.79
Manganese Dioxide, MnO ₂	0.06
Phosphorus Pentoxide, P ₂ O ₅	0.13
Strontium Oxide, SrO	0.17
Barium Oxide, BaO	0.49
Sulfur Trioxide, SO ₃	1.37
Loss on Ignition (750°C)	0.39
Total	100.00
Moisture (105°C), as Received	0.11

Analysis per ASTM C 311/XRF
Analyst NHG/ 3/12/2026 14:38


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