



3250 Linebaugh Rd.
 Xenia, OH 45385
 Telephone (800) 762-0040
 FAX (937) 879-8425

**CEMENT
MILL
TEST**

Cement Identified as: Type III **Date:** 12/01/23
Production Dates: October, 2023 **Silo:** 3

STANDARD CHEMICAL REQUIREMENTS (ASTM C114)	SPECIFICATIONS	ASTM C 150 TYPE III	AASHTO M85 Type III	RESULTS
Silicon Dioxide (SiO ₂), %		----		19.2
Aluminum Oxide (Al ₂ O ₃), %		----		4.3
Ferric Oxide (Fe ₂ O ₃), %		----		3.0
Calcium Oxide (CaO), %		----		60.9
Magnesium Oxide (MgO), %	Maximum	6.0	6.0	4.5
Sulfur Trioxide (SO ₃), % ^A	Maximum	3.5	3.5	4.2
Loss on Ignition (LOI), %	Maximum	3.5	3.5	2.2
Insoluble Residue, %	Maximum	1.50	1.5	0.57
Free Calcium Oxide, %				0.6
Alkalies (Na ₂ O equivalent), %		----		0.78
Tricalcium Silicate (C ₃ S), Potential %		----		56
Dicalcium Silicate (C ₂ S), Potential %		----		13
Tricalcium Aluminate (C ₃ A), Potential %	Maximum	15	15	6
Tetracalcium Aluminoferrite (C ₄ AF), Potential %		----		9
CO ₂ , %				1.3
Limestone, %	Maximum	5.0	5.0	3.0
CaCO ₃ in Limestone, %	Minimum	70	70	97
PHYSICAL REQUIREMENTS				
(ASTM C204) Blaine Fineness, m ² /kg		----		617
(ASTM C191) Time of Setting (Vicat)				
Initial Set, minutes	Range	45 - 375	45 - 375	110
Final Set, minutes				223
(ASTM C185) Air Content, %	Maximum	12	12	8
(ASTM C151) Autoclave Expansion, %	Maximum	0.80	0.80	0.11
(ASTM C1038) Expansion in Water, %	Maximum	0.02	0.02	0.008
(ASTM C187) Normal Consistency, %		----		29.3
(ASTM C109) Compressive Strength, psi (Mpa)				
1 Day	Minimum	1740 (12.0)	1740 (12.0)	4480 (30.9)
3 Day	Minimum	3480 (24.0)	3480 (24.0)	5597 (38.6)
7 Day		----		6467 (44.6)
28 Day		----		7583 (52.3)

^A Per ASTM C150 Table 1 footnote D

We hereby certify that this cement conforms to all of the standard requirements for portland cement in the above specification for the type specified.

By: Rusty Strader

Physical Testing completed by: TL, JT
 Chemical Testing completed by: CA, NC, KL, NM

Rusty Strader
 Quality Control Manager
 Fairborn Cement Company



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Additional Data

Type	Inorganic Processing Addition Data	
	Baghouse Dust	Limestone
Amount (%)	0.0	3.0
SiO2 (%)		1.1
Al2O3 (%)		0.6
Fe2O3 (%)		0.5
CaO (%)		53.5
SO3 (%)		0.1

Base cement Phase Composition

C3S (%)	51
C2S (%)	16
C3A (%)	6
C4AF (%)	9

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By: Rusty Strader

Rusty Strader
Quality Control Manager
Fairborn Cement Company