



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

**CEMENT
MILL
TEST**

Cement Identified as: Type III **Date:** 07/01/22
Production Dates: May, 2022 **Silo:** 3

STANDARD CHEMICAL REQUIREMENTS (ASTM C114)	SPECIFICATIONS	ASTM C 150 TYPE III	AASHTO M85 Type III	RESULTS
Silicon Dioxide (SiO ₂), %		----		19.3
Aluminum Oxide (Al ₂ O ₃), %		----		4.5
Ferric Oxide (Fe ₂ O ₃), %		----		3.2
Calcium Oxide (CaO), %		----		61.3
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	2.3
Insoluble Residue, %	Maximum	1.50	1.5	0.48
Free Calcium Oxide, %				0.6
Alkalies (Na ₂ O equivalent), %		----		0.85
Tricalcium Silicate (C ₃ S), Potential %		----		56
Dicalcium Silicate (C ₂ S), Potential %		----		13
Tricalcium Aluminate (C ₃ A), Potential %	Maximum	15	15	7
Tetracalcium Aluminoferrite (C ₄ AF), Potential %		----		10
CO ₂ , %				1.1
Limestone, %	Maximum	5.0	5.0	2.7
CaCO ₃ in Limestone, %	Minimum	70	70	97
PHYSICAL REQUIREMENTS				
(ASTM C204) Blaine Fineness, m ² /kg		----		616
(ASTM C191) Time of Setting (Vicat)				
Initial Set, minutes	Minimum	45	45	112
Final Set, minutes	Maximum	375	375	209
(ASTM C185) Air Content, %	Maximum	12	12	8
(ASTM C151) Autoclave Expansion, %	Maximum	0.80	0.80	0.10
(ASTM C1038) Expansion in Water, %	Maximum	0.02	0.02	0.009
(ASTM C187) Normal Consistency, %		----		28.9
(ASTM C109) Compressive Strength, psi (Mpa)				
1 Day	Minimum	1740 (12.0)	1740 (12.0)	4498 (31.0)
3 Day	Minimum	3480 (24.0)	3480 (24.0)	5588 (38.5)
7 Day		----		6365 (43.9)
28 Day		----		7106 (49.0)

^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: DG, JT
 Chemical Testing completed by: TA, NC, KL, NM

Rusty Strader
 Quality Control Manager
 Fairborn Cement Company



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Additional Data

Type	Inorganic Processing	
	Baghouse Dust	Limestone
Amount (%)	0.0	2.7
SiO ₂ (%)	12.9	2.6
Al ₂ O ₃ (%)	4.5	1.1
Fe ₂ O ₃ (%)	1.5	0.6
CaO (%)	42.7	50.4
SO ₃ (%)	1.3	0.4

Base cement Phase Composition

C3S (%)	51
C2S (%)	16
C3A (%)	7
C4AF (%)	10

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*

Rusty Strader
 Quality Control Manager
 Fairborn Cement Company