



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

**CEMENT  
MILL  
TEST**

**Cement Identified as:**

**Type IA**

**Date: 09/28/20**

**Production Dates:**

**August, 2020**

**Silo: 7**

STANDARD CHEMICAL REQUIREMENTS (ASTM C 114)	SPECIFICATIONS	ASTM C 150 TYPE IA	AASHTO M85 Type IA	RESULTS
Silicon Dioxide (SiO <sub>2</sub> ), %		----		<b>18.9</b>
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> ), %		----		<b>4.8</b>
Ferric Oxide (Fe <sub>2</sub> O <sub>3</sub> ), %		----		<b>3.1</b>
Calcium Oxide (CaO), %		----		<b>62.3</b>
Magnesium Oxide (MgO), %	Maximum	6.0	6.0	<b>4.8</b>
Sulfur Trioxide (SO <sub>3</sub> ), % <sup>A</sup>	Maximum	3.0	3.0	<b>3.2</b>
Loss on Ignition (LOI), %	Maximum	3.0	3.0	<b>2.5</b>
Insoluble Residue, %	Maximum	0.75	0.75	<b>0.32</b>
Alkalies (Na <sub>2</sub> O equivalent), %		----		<b>0.82</b>
Tricalcium Silicate (C <sub>3</sub> S), Potential %		----		<b>64</b>
Dicalcium Silicate (C <sub>2</sub> S), Potential %		----		<b>6</b>
Tricalcium Aluminate (C <sub>3</sub> A), Potential %		----		<b>7</b>
Tetracalcium Aluminoferrite (C <sub>4</sub> AF), Potential %		----		<b>9</b>
CO <sub>2</sub> , %				<b>1.8</b>
Limestone, %	Maximum	5	5	<b>1.8</b>
CaCO <sub>3</sub> in Limestone, %	Minimum	70	70	<b>98</b>
<b>PHYSICAL REQUIREMENTS</b>				
(ASTM C 204) Blaine Fineness, m <sup>2</sup> /kg	Minimum	260	260	<b>401</b>
(ASTM C 191) Time of Setting (Vicat)				
Initial Set, minutes	Minimum	45	45	<b>105</b>
Final Set, minutes	Maximum	375	375	<b>215</b>
(ASTM C 185) Air Content, %	Range	16-22	16-22	<b>20</b>
(ASTM C 151) Autoclave Expansion, %	Maximum	0.80	0.80	<b>0.13</b>
(ASTM C 1038) Expansion in Water, %	Maximum	0.02	0.02	
(ASTM C 187) Normal Consistency, %		----		<b>26.0</b>
(ASTM C 109) Compressive Strength, psi (Mpa)				
1 Day				<b>1850 ( 12.8 )</b>
3 Day	Minimum	1450 (10.0 )	1450 (10.0)	<b>2860 ( 19.7 )</b>
7 Day	Minimum	2320 (16.0 )	2320 (16.0)	<b>3350 ( 23.1 )</b>
28 Day	Minimum	3190 (22.0 )	3190 (22.0)	<b>3860 ( 26.6 )</b>

<sup>A</sup> 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, MS  
 Chemical Testing completed by: TA, NC, JD, NM

Rusty Strader  
 Quality Control Manager  
 Fairborn Cement Company



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

**CEMENT  
MILL  
TEST**

**Cement Identified as:** Type IA **Date:** 09/28/20  
**Production Period:** August, 2020 **Silo:** 7

**Additional Data**

Type	Inorganic Processing	
	Addition Data	Limestone
Amount (%)	Baghouse Dust	---
SiO2 (%)	0.0	4.2
Al2O3 (%)	11.6	0.9
Fe2O3 (%)	4.2	0.6
CaO (%)	1.6	0.6
SO3 (%)	37.7	45.9
	0.7	0.2

Base cement Phase Composition

C3S (%)	61
C2S (%)	5
C3A (%)	7
C4AF (%)	9

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