



A CRH COMPANY

STRONG FOUNDATIONS. STRONG FUTURE.

Durkee Plant
Mill Test Report

Mill Analysis No.: 22-31
Bin No.: 2, 3, 4, Dome

Cement Type: I II
Production Period: September 1 thru September 30, 2022

Date: 10-17-2022

STANDARD REQUIREMENTS
ASTM C150

CHEMICAL			
Item	(C114)	Spec Limit	Test Result
SiO2 (%)		A	21.9
Al2O3 (%)		6.0 max.	3.7
Fe2O3 (%)		6.0 max.	3.1
CaO (%)		A	63.9
MgO (%)		6.0 max.	1.6
SO3 (%)		3.0 max.	2.7
Loss On Ignition (%)		3.5 max.	2.3
Na2O (%)		A	0.22
K2O (%)		A	0.48
TiO2 (%)		A	0.26
P2O5 (%)		A	0.13
Mn2O3 (%)		A	0.07
Insoluble Residue (%)		1.5 max.	0.96
CO2 (%)		A	1.41
Limestone %		5.0 max.	4.0
CaCO3 in Limestone		70 min.	79
C3S + 4.75(C3A)		100 max.	74
Potential Compounds (%)		C	
	C3S	A	55
	C2S	A	20
	C3A	8 max.	4
	C4AF	A	9
	C4AF+2(C3A)	A	17

Tested by L.M.

PHYSICAL			
Item		Spec Limit	Test Result
Air Content of Mortar (volume %)			
C185		12 max.	3.6
Fineness (m ² /kg)			
C204 (Air permeability)		260 min.	381
Compressive Strength psi (Mpa)		Min.:	
C109	1 Day	A	2060 (14.2)
	3 Days	1740 (12.0)	3810 (26.3)
	7 Days	2760 (19.0)	4920 (33.9)
Time of Setting (minutes)			
C191 (Vicat)			
	Initial	Not less than 45	110
		Not more than 375	

Tested by S.B.

OPTIONAL REQUIREMENTS
ASTM C150, (other)

CHEMICAL		
Item	Spec Limit	Test Result
Equivalent Alkalies (%)	0.60 max.	0.54
Chloride (%)	B	0.006

A = not applicable
B = Test results represents most recent value and is provided for informational purposes only.
C = Adjusted per A 1.6.
D = Test results represents the previous production period.

PHYSICAL			
Item		Spec Limit	Test Result
Time of Set - Final (minutes) C191		B	210
False Set (%) C451		50 min.	85
Heat of Hydration cal/g (kj/kg)			
C1702	7 days	B	84 (351)
Compressive Strength psi (Mpa)			
C109	28 Days	4060 (28.0)	6320 (43.6) D
Sulfate Resistance (%)	C452	0.040	0.017 B
Water Expansion (%)	C1038	0.020	0.012
% retain on 45µm sieve		B	2.65

We certify that the above described cement, at the time of shipment, meets the chemical and physical requirement of the ASTM C150-21 or AASHTO M-85 -12 Type I-II specification also will meet CSA A3000-18 Type GU, MS and HS.

Signature: 

Title: Quality Control Manager



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