



CEMENT TESTING CENTER

CeMAP Bldg. No. 1 Cpl) Cruz St. cor. E. Rodriguez Jr. Ave.
Bagong Ilog, Pasig City 1600 Philippines

Tel. (632) 671-7583 Fax: (632) 671-8402 Email: ctcenter@cemap.org.ph



DPWH-BRS
Accredited Laboratory

TEST CERTIFICATE

Test Certificate No.: P-062020-00865-F		Date of Issue: 25-Jun-20		No. of Pages: 1 of 2	
Sample Reference No.: C83452 - 0320		Kind and Type of Sample: Portland Cement, T-I			
Name of Company/Individual: NGC Land Corporation			Date Sampled: 11-Mar-20		
Address: 250 Ibuna St. Brgy. Onse, San Juan City			Date Received: 11-Mar-20		
Sampled by: Edgardo C. Fermin		Submitted by: Edgardo C. Fermin		Date of test: 26-May-20	
Test Specification: PNS 07:2005 / Amendment 2:2010		Test Methods Used: as specified below			
Sampling Method Used: Not Specified					
Sample identification: Barako Cement - For Informational Purpose Only					

PHYSICAL TESTS

PARAMETERS		TEST METHODS	SPECIFICATION LIMITS	TEST RESULTS	UNCERTAINTY (U)	REMARKS		
FINENESS, (%) passing 75 um sieve		ASTM C 786	A	99.1				
FINENESS, (%) passing 45 um sieve		ASTM C 430	A	D				
FINENESS: Specific Surface Blaine, (m ² /kg)		ASTM C 204	260 min.	377	± 12			
TIME OF SETTING: Vicat Needle	Initial Time, (minutes)	ASTM C 191	45 min. , 375 max.	120	± 12			
	(hours)		A	2.00				
	Final Time, (minutes)		A	225				
	(hours)		A	3.75				
AUTOCLAVE EXPANSION, (%)		ASTM C 151/	0.80 max.	0.09	± 0.0026			
AUTOCLAVE CONTRACTION, (%)		C151M	A	A				
NORMAL CONSISTENCY, (%)		ASTM C 187	A	25.0				
DENSITY, (g/cm ³)		ASTM C 188	A	D				
COMPRESSIVE STRENGTH		ASTM C 109/ C109M	*psi	MPa	*psi	MPa	*psi	MPa
1 day	A		A	B	B			
3 days	1740 min.		12.0 min.	3590	24.8	± 108	± 0.7	
7 days	2760 min.		19.0 min.	4490	31.0	± 119	± 0.8	
28 days	4060 min.		28.0 min.	6060	41.8	± 142	± 1.0	
AIR CONTENT, (Volume %)		ASTM C 185	12 max.	D				

REMARKS: This certificate shall not be reproduced except in full, without the written approval of the Manager, Cement Testing Center (CTC).

This report gives the result of tests that relate only to the above sample submitted to CTC.

A - not applicable;

B - not required by the test method

D - not requested by the customer

(U) - The expanded uncertainty values are calculated at 95% confidence level.

* - 1psi = 0.006895MPa

Information in the gray-colored box are customer supplied / preference.

Checked by:

Approved by:

ATTIADO GUERRERO J. DE LEON
Physical Group - Supervisor

MA. BELLA O. BALLON, R. Ch.
Quality Management Officer

PRC License No. 0007393



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TEST CERTIFICATE

Test Certificate No.:	P-062020-00865	Date of Issue:	1-Jun-20	No. of Pages:	2 of 2
Sample Reference No.:	C83452 - 0320	Kind and Type of Sample:	Portland Cement, T-1		
Name of Company / Individual:	NGC Land Corporation			Date Sampled:	11-Mar-20
Address:	250 Ibuna St. Brgy. Onse, San Juan City			Date Received:	11-Mar-20
Sampled by:	Edgardo C. Fermin	Submitted by:	Edgardo C. Fermin	Date of Test:	25-May-20
Test Specification:	ASTM C150/C150M - 18	Test Methods Used:	as specified		
Sampling Method Used:	not specified				
Sample identification:	Barako Cement - For Informational Purpose Only				

CHEMICAL ANALYSIS

PARAMETERS, (%)	Test Methods	SPECIFICATION LIMITS	TEST RESULTS	UNCERTAINTY (u)	REMARKS
Silicon Dioxide, (SiO ₂)	Li borate fusion/XRF	A	20.7		
Aluminum Trioxide, (Al ₂ O ₃)		A	5.3		
Ferric Oxide, (Fe ₂ O ₃)		A	3.13		
Calcium Oxide, (CaO)		A	61.8		
Magnesium Oxide, (MgO)		6.0 max.	2.6		
Loss on Ignition, (LOI)		3.0 max.	3.0	± 0.05	
Insoluble Residue, (IR)	ASTM C114	1.5 max.	0.14	± 0.02	
Sulfur Trioxide, (SO ₃)	Li borate fusion/XRF	3.5 max.	1.81		
Freelime, (F-CaO)	BS 4550	A	2.2		
COMPLEXES, (%)					
Tri-Calcium Silicate, (C ₃ S)	ASTM C150	A	49		
Di-Calcium Silicate, (C ₂ S)		A	22		
Tri-Calcium Aluminate, (C ₃ A)		A	9		
Tetra-Calcium Aluminato-Ferrite, (C ₄ AF)		A	10		
RATIOS, (%)					
Silica Modulus, (S.M.)	ASTM C150	A	2.5		
Hydraulic Modulus, (H.M.)		A	2.1		
Alumina-Iron, (A/F)		A	1.7		
Lime Saturation Factor, (L.S.F.)		A	91.2		

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Checked by:

Approved by:

YASMIN MALAYA G. GOMEZ, R.Ch.

MA BELLA O. BALLON, R.Ch.

Chemical - Supervisor

Quality Management Officer