



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-8RS
 Accredited Laboratory

TEST CERTIFICATE

Test Certificate No.: PS-082020-01381-P	Date of Issue: 11-Aug-20	No. of Pages: 1 of 2
Sample Reference No.: C83899 - 0720	Kind and Type of Sample: Portland Cement, T-I	
Name of Company/Individual: Cohaco Merchandising & Dev't Corp./ BPS-SOC	Date Sampled: 18-Jul-20	
Address: 2246 Don Chino Roces Ave., Brgy. Bangkal, Makati City	Date Received: 27-Jul-20	
Sampled by: Omar Gregorio / Webb Fontaine Asia Inc.	Submitted by: Efren D. Acuña Jr.	Date of test: 28-Jul-20
Test Specification: PNS 07:2005 / Amendment 2:2010	Test Methods Used: as specified below	
Sampling Method Used: Not Specified		
Sample identification: Barako Cement - BL No. BE-01		

PHYSICAL TESTS

PARAMETERS	TEST METHODS	SPECIFICATION LIMITS	TEST RESULTS	UNCERTAINTY (U)	REMARKS		
FINENESS, (%) passing 75 μ m sieve	ASTM C 786	A	98.8				
FINENESS, (%) passing 45 μ m sieve	ASTM C 430	A	94.4				
FINENESS: Specific Surface Blaine, (m ² /kg)	ASTM C 204	260 min.	363	± 12			
TIME OF SETTING, Vicat Needle	ASTM C 191	45 min., 375 max.	76	± 8			
		A	1.27				
		A	210				
		A	3.50				
AUTOCLAVE EXPANSION, (%)	ASTM C 151/ C151M	0.80 max.	0.03	± 0.0010			
AUTOCLAVE CONTRACTION, (%)	ASTM C 187	A	A				
NORMAL CONSISTENCY, (%)	ASTM C 187	A	26.0				
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.	4120	28.4	± 124	± 0.9
7 days		2760 min.	19.0 min.	5870	40.5	± 155	± 1.1
28 days		4060 min.	28.0 min.	C	C		
AIR CONTENT, (Volume %)	ASTM C 185	12 max.	9	± 1.0			

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 at the gray-colored box are customer supplied / preference

Checked by:
ATTIADO QUERRERO J. DE LEON
 Physical Group - Supervisor

Approved by:
MA-BELLA O. BALLON, R. Ch.
 Quality Management Officer
 PRO License No. 0007393



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TEST CERTIFICATE

Test Certificate No.:	PS-082020-01381	Date of Issue:	11-Aug-20	No. of Pages:	2 of 2
Sample Reference No.:	C83899-0720	Kind and Type of Sample:	Portland Cement, T-1		
Name of Company / Individual:	Cohaco Merchandising & Dev't Corp. / BPS-SOC			Date Sampled:	18-Jul-20
Address:	2246 Don Chino Roces Ave., Brgy. Bangkal, Makati City			Date Received:	27-Jul-20
Sampled by:	Omar Gregorio / Webb Fontaine Asia Inc.	Submitted by:	Efren D. Acuña Jr.	Date of Test:	05-Aug-20
Test Specification:	PNS 07: 2005 / Amd. 2:2010		Test Methods Used:	as specified	
Sampling Method Used:	Not Specified				
Sample Identification:	Barako Cement - BL No. BE-01				

CHEMICAL ANALYSIS

PARAMETERS, (%)	Test Methods	SPECIFICATION LIMITS	TEST RESULTS	UNCERTAINTY (u)	REMARKS
Silicon Dioxide, (SiO ₂)	Li borate fusion/XRF	A	21.0		
Aluminum Trioxide, (Al ₂ O ₃)		A	5.1		
Ferric Oxide, (Fe ₂ O ₃)		A	3.04		
Calcium Oxide, (CaO)		A	64.1		
Magnesium Oxide, (MgO)		6.0 max.	1.1		
Loss on Ignition, (LOI)		3.0 max.	1.2	± 0.02	
Insoluble Residue, (IR)	PNS ASTM C114	0.75 max.	0.33	± 0.05	
Sulfur Trioxide, (SO ₃)	Li borate fusion/XRF	3.0 max.	2.79		
Free lime,	BS 4550	A	1.3		
COMPLEXES, (%)					
Tri-Calcium Silicate, (C ₃ S)	PNS ASTM C114	A	55		
Di-Calcium Silicate, (C ₂ S)		A	19		
Tri-Calcium Aluminate, (C ₃ A)		A	8		
Tetra-Calcium Aluminoferrite, (C ₄ AF)		A	9		
RATIOS, (%)					
Silica Modulus, (S.M.)	PNS ASTM C114	A	2.6		
Hydraulic Modulus, (H.M.)		A	2.2		
Alumina-Iron, (A/F)		A	1.7		
Lime Saturation Factor, (L.S.F.)		A	92.9		

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Checked by: 08/12/2020
YASMIN MALAYA S. GOMEZ, R.Ch.
 Chemical Supervisor

Approved by:
MA. BELLA O. BALLON, R.Ch.
 Quality Management Officer