

## TEST REPORT

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Our Ref: 2538/PP146/16  
Report: **BCT-160615-00050**  
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Date: 2016-09-20

Yangzhou Conch Cement Co. Ltd  
**Attention: Mr Z Andong**  
738 Dongfang Road  
Shanghai  
CHINA

### CEMENT PART 1: COMPOSITION, SPECIFICATIONS AND CONFORMITY CRITERIA FOR COMMON CEMENTS SANS 50197-1:2013 PRE PERMIT SAMPLE

#### 1 OBJECT OF THE TEST

1.1 The samples described in 2.1 were tested and comply with the requirements of SANS 50197-1:2013 with respect to CEM II type cement. Uncertainties of measurements were not applied to the results.

#### 2 SAMPLES

##### 2.1 Description of samples

Two samples of cementitious material of  $\pm 5$  kg each and marked as follows:

a) CEM II/B-M 32,5 R                      b) CEM II/A-M 42,5 R

##### 2.2 Sample condition:

The samples were received in metal containers and were considered suitable for testing.

2.3 **Date sampled:** 25 May 2016.

2.4 **Date received:** 09 June 2016

2.5 **Date tests completed:** 03 August 2016

#### 3 NATURE OF TEST

Please refer to section 4 of this report for results tabulated as per the requirements of SANS 50197-1:2013.

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4 RESULTS

Nature of test	Results		Requirements	
	CEM II/B-M 32,5 R	CEM II/A-M 42,5 R	Strength Class 32,5 R	Strength Class 42,5 R
<b>4.1 Mechanical requirements</b>				
4.1.1 Compressive strength at 2 days, MPa	24,6	28,5	≥ 10	≥ 20
at 28 days, MPa	51,6	60,3	≥ 32,5 ≤ 52,5	≥ 42,5 ≤ 62,5
4.1.2 Initial setting time, minutes	215	190	≥ 75	≥ 60
4.1.3 Soundness, expansion, mm	0,5	0,5	≤ 10	≤ 10

Nature of test	Results		Requirements
	CEM II/B-M 32,5 R	CEM II/A-M 42,5 R	All types
<b>4.2 Chemical requirements</b>			
4.2.1 Sulphate content as SO <sub>3</sub> , % (m/m)	2,08	2,45	≤ 3,5
4.2.2 Chloride content, % (m/m)	<0,05	<0,05	≤ 0,10
CEM I,II,IV& V Type 42,5R, 52,5N & 52,5R may have a SO <sub>3</sub> content of ≤ 4,0 % (m/m). Loss on ignition and Insoluble residue are not applicable on CEM II, IV and V			

This report relates only to the specific sample(s) tested as identified herein. It does not imply SABS approval of the quality and/or performance of the item(s) in question and the test results do not apply to any similar item that has not been tested. (Refer also to the complete conditions printed on the back of official test reports.)

5 EQUIPMENT INFORMATION

Type of equipment	Capacity/Range	Equipment serial number (SABS)	Calibration certificate number/Expiry date
Avery Denison Compression Machine	50kN to 2700 kN	7123/33587-C	600422FM03S/ March 2017
Mixer	62±5/125±10/140±5/285±0 Rev/Min	61192	C10358/ August 2016
Vibrating Table	0,75 ± 0,05mm	24895	C10359/ August 2016
Balance	11 000 g	19887	2016/B023A/ May 2017
Balance	220g	4124/3038/34438	GAC A20.16/A16.18/A60.2/ November 2016
Furnace	1200 °C	4125/2006	2020.8833-1/2/ April 2017
Stopwatch	30 minutes	53935727	71791/ October 2017
Steel ruler	300 mm	XC003	MGR4810/ December 2016

6 UNCERTAINTIES

Tests	Uncertainty
Compressive Strength	± 2,1%
Soundness	± 2,07%
Setting Time	± 2,07%
Sulfates, SO <sub>3</sub>	± 0,05%
Chlorides	± 0,002%

7 NAME OF LABORATORY

Cement Laboratory of SABS Commercial SOC Ltd.

I Lechedie   
 Test officer: Cement Physical

J Matshivha   
 Senior Test officer: Cement Chemical

  
 J Maswikaneng  
 Manager: Civil Testing

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