

# KIRTON CONCRETE SERVICES LTD

## INDEPENDENT TESTING LABORATORY

MANOR HOUSE, STATION ROAD, HIBALDSTOW, BRIGG. DN20 9EB

TEL: 01652 656931 EMAIL: [KIRTONLAB@AOL.COM](mailto:KIRTONLAB@AOL.COM)



1175

### TEST REPORT

Client :- TITAN CEMENT LTD. HULL  
Report reference :- CHEMISTRY 44  
Ship reference :- 8-17  
Sample :- ORDINARY PORTLAND CEMENT  
Sand :- FRENCH  
Date received :- 02-Aug-17  
Date of tests :- 02-Aug-17 to 30/08/2017

#### CHEMICAL COMPOSITION:- % by mass, as received

IR	0.25 (BSEN 196-2:2013)
SO <sub>3</sub>	2.70 (BSEN 196-2:2013)
LOI	2.08 (BSEN 196-2:2013)
K <sub>2</sub> O	0.50 (BSEN 196-2:2013)
Na <sub>2</sub> O	0.12 (BSEN 196-2:2013)
Na <sub>2</sub> O(eq)	0.45 (BSEN 196-2:2013)
Chloride	0.03 (BSEN 196-2:2013)

The results determined by XRF analysis are not covered by the laboratories accreditation.

SiO <sub>2</sub>	19.61 by XRF
Al <sub>2</sub> O <sub>3</sub>	3.74 by XRF
Fe <sub>2</sub> O <sub>3</sub>	3.74 by XRF
CaO	63.41 by XRF
MgO	0.85 by XRF

The following results are not UKAS accredited:-

L.S.F.	1.00
C <sub>3</sub> A	3.59
C <sub>3</sub> S	65.09
C <sub>2</sub> S	7.13
C <sub>4</sub> AF	11.37
Free Lime	1.43

A handwritten signature in black ink, appearing to be 'S. Burton'.

End of Report

Signed.....

Page 1 of 3

Date 31/08/2017

J.M. Burton Quality Manager

S. Burton Technical Manager

# KIRTON CONCRETE SERVICES LTD

## INDEPENDENT TESTING LABORATORY

MANOR HOUSE, STATION ROAD, HIBALDSTOW, BRIGG. DN20 9EB

TEL: 01652 656931 EMAIL: [KIRTONLAB@AOL.COM](mailto:KIRTONLAB@AOL.COM)



1175

### TEST RESULTS

Client :- TITAN CEMENT LTD. HULL  
Report reference :- TITAN 44  
Ship reference :- 8-17  
Sample :- ORDINARY PORTLAND CEMENT  
Sand :- FRENCH  
Date received :- 02-Aug-17  
Date of tests :- 02-Aug-17 to 30-Aug-17

#### Results

DENSITY 3200 kg/m<sup>3</sup> (BSEN 196-6:2010 N.AC. 5.3)  
FINENESS 4000 cm<sup>2</sup>/g (BSEN 196-6:2010)  
STANDARD CONSISTANCE 29.5 % (BSEN 196-3:2005)  
INITIAL SETTING TIME 130 mins (BSEN 196-3:2005)  
SOUNDNESS 1.0 mm (BSEN 196-3:2005)

#### COMPRESSIVE STRENGTH:- mortar prisms

(BSEN 196-1:2005)

AT 2 DAYS 30.0 Mpa (Mean of 6 results, none discarded)

AT 7 DAYS 44.0 Mpa (Mean of 6 results, none discarded)

AT 28 DAYS 65.6 Mpa (Mean of 6 results, none discarded)

#### CHEMICAL COMPOSITION:- % by mass, as received

K<sub>2</sub>O 0.50 % (BSEN 196-2:2013)  
Na<sub>2</sub>O 0.12 % (BSEN 196-2:2013)  
Na<sub>2</sub>O(eq) 0.45 % (BSEN 196-2:2013)  
Chloride 0.03 % (BSEN 196-2:2013)

End of Report

Signed.....

Page 2 of 3

Date 31/08/2017

J.M. Burton Quality Manager

S. Burton Technical Manager

# KIRTON CONCRETE SERVICES LTD

## INDEPENDENT TESTING LABORATORY

MANOR HOUSE, STATION ROAD, HIBALDSTOW, BRIGG. DN20 9EB

TEL: 01652 656931 EMAIL: [KIRTONLAB@AOL.COM](mailto:KIRTONLAB@AOL.COM)



1175

### TEST RESULTS

Client :- TITAN CEMENT LTD. HULL  
Report reference :- CUBES 44  
Ship reference :- 8-17  
Sample :- ORDINARY PORTLAND CEMENT  
Sand :- FRENCH  
Date received :- 02-Aug-17  
Date of tests :- 02-Aug-17 to 30-Aug-17

#### Results

AT 3 DAYS	26.5	28.0	28.0	Average	27.5 N/mm <sup>2</sup>
AT 7 DAYS	33.5	33.0	33.5	Average	33.3 N/mm <sup>2</sup>
AT 28 DAYS	52.5	52.0	53.5	Average	52.7 N/mm <sup>2</sup>
SLUMP					90 mm

End of Report

NOTE :- The slump test was carried out on 03/08/2017 at 14:30 as per BSEN 12350-2:200 B.Beck The sampling was carried out in accordance with BSEN 12350-1: 2009. The mixing, sampling and slump test were carried out at Kirton Concrete Services Ltd's laboratory. The time lapse from sampling to commencement of test was zero. The slump was a true slump

Signed.....

J.M. Burton

Quality Manager

Page 3 of 3

Date 31.8.17

S. Burton

Technical Manager

