



LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 69848
Job No. : 47723
Issue date: 23/12/20

Location: Manchester																															
Date cast: 25/11/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 26/11/20 Delvd./Collected: Collected				Mix No: Grout Spec. Strength: N/S (N/mm ²) Spec. Slump: 550 Flow (mm) Min. Cement Content: (kg/m ³) Water Cement Ratio: 700.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: (mm) Additional Information:																											
Supplier: Source: Time Batched: Na Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated			Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																					
				Wt. of cube (g)		Density (Kg/m ³)																									
				In Air	In Water																										
1	7	2/12/20	100 x 100 x 100	1569	566	1560	8.4	0.8	A	DW	CC																				
2	7	2/12/20	100 x 100 x 100	1547	569	1580	8.6	0.9	A	DW	CC																				
3	14	9/12/20	100 x 100 x 100	1538	531	1530	11	1.1	A	DB																					
4	28	23/12/20	100 x 100 x 100	1474	509	1530	25	2.5	A	DW																					
5	28	23/12/20	100 x 100 x 100	1460	500	1520	23	2.3	A	DW																					
6	Spare																														
Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing. Defect abbreviations <table border="0"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture												CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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MMFB	Matrix missing from base	MC	Missing corner																												
Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019
 Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012
 The stated result only relates to the item/location tested, this report shall not be reproduced except in full.

Signed:

Dave Wain
Cube Technician



LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 69998
Job No. : 47723
Issue date: 23/12/20

Location:		Manchester																													
Date cast: 25/11/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 3/12/20 Delvd./Collected: Collected				Mix No: Grout 6.50 Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.50 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 560 (mm) Additional Information:																											
Supplier: Source: Time Batched: PM Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	9	4/12/20	100 x 100 x 100	1594	574	1560	18	1.8	A	DW	CC																				
2	9	4/12/20	100 x 100 x 100	1598	578	1570	17.6	1.8	A	DW	CC																				
3	14	9/12/20	100 x 100 x 100	1574	552	1540	19	1.9	A	DB																					
4	28	23/12/20	100 x 100 x 100	1480	514	1530	27	2.7	A	DW																					
5	28	23/12/20	100 x 100 x 100	1472	508	1530	25	2.5	A	DW																					
6	Spare																														
Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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Dave Wain
Cube Technician

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70000
Job No. : 47723
Issue date: 29/12/20

Location:		Manchester									
Date cast: 26/11/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 3/12/20 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 480 (mm) Additional Information:							
Supplier: Cemeration Source: Secoma Mix Time Batched: PM Ticket No: Na Nominal Size: 100											

Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated			Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test	
				Wt. of cube (g)		Density (Kg/m ³)					
				In Air	In Water						
1	8	4/12/20	100 x 100 x 100	1574	577	1580	17.2	1.7	A	DW	CC
2	8	4/12/20	100 x 100 x 100	1568	573	1580	18.7	1.9	A	DW	CC
3	14	10/12/20	100 x 100 x 100	1588	566	1550	24	2.4	A	BS	
4	33	29/12/20	100 x 100 x 100	1447	517	1560	25.4	2.5	A	DW	
5	33	29/12/20	100 x 100 x 100	1448	520	1560	24.3	2.4	A	DW	
6	Spare										

Initial Curing: Curing by Client, No Information Available

Laboratory curing: After demoulding / date recieved (if delivered or collected).
Cured in water at a temperature of 20°C ± 2°C until time of testing.

Defect abbreviations

CC	Chipped corners	FR	Fins removed
CE	Chipped edges	OoS	Out of square - unable to test
RS	Rough surfaces	CR	Cube retained
SV	Surface voids	PC	Poor compaction
MMFB	Matrix missing from base	MC	Missing corner

Surface conditions: Clean and free from excess moisture

Remarks on receipt: Satisfactory **Sampling certificate:** Yes

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019
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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70140
Job No. : 47723
Issue date: 29/12/20

Location:		Manchester																													
Date cast: 1/12/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 10/12/20 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 480 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	9	10/12/20	100 x 100 x 100	1622	620	1620	21.4	2.1	A	DW																					
2	9	10/12/20	100 x 100 x 100	1608	607	1610	22.1	2.2	A	DW																					
3	14	15/12/20	100 x 100 x 100	1543	552	1560	23	2.3	A	DW																					
4	28	29/12/20	100 x 100 x 100	1474	527	1560	24.7	2.5	A	DW																					
5	28	29/12/20	100 x 100 x 100	1462	529	1570	23.4	2.3	A	DW																					
6	Spare																														
Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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MMFB	Matrix missing from base	MC	Missing corner																												
Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70141
Job No. : 47723
Issue date: 31/12/20

Location: Manchester											
Date cast: 3/12/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 10/12/20 Delvd./Collected: Collected						Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 480 (mm) Additional Information:					
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100											

Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated			Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test	
				Wt. of cube (g)		Density (Kg/m ³)					
				In Air	In Water						
1	7	10/12/20	100 x 100 x 100	1606	594	1590	18.8	1.9	A	DW	
2	7	10/12/20	100 x 100 x 100	1600	591	1590	17.2	1.7	A	DW	
3	14	17/12/20	100 x 100 x 100	1606	590	1580	22.2	2.2	A	DW	
4	28	31/12/20	100 x 100 x 100	1609	580	1560	27.8	2.8	A	DW	
5	28	31/12/20	100 x 100 x 100	1612	592	1580	29.2	2.9	A	DW	
6	Spare										

Initial Curing: Curing by Client, No Information Available

Laboratory curing: After demoulding / date recieved (if delivered or collected).
Cured in water at a temperature of 20°C ± 2°C until time of testing.

Defect abbreviations
 CC Chipped corners FR Fins removed
 CE Chipped edges OoS Out of square - unable to test
 RS Rough surfaces CR Cube retained
 SV Surface voids PC Poor compaction
 MMFB Matrix missing from base MC Missing corner

Surface conditions: Clean and free from excess moisture

Remarks on receipt: Satisfactory	Sampling certificate: Yes
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Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019
 Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012
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Cube Technician



LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70139
Job No. : 47723
Issue date: 31/12/20

Location:		Manchester																													
Date cast: 2/12/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 10/12/20 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 480 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
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				In Air	In Water																										
1	8	10/12/20	100 x 100 x 100	1549	551	1550	23	2.3	A	DW																					
2	8	10/12/20	100 x 100 x 100	1544	548	1550	22	2.2	A	DW																					
3	14	16/12/20	100 x 100 x 100	1616	620	1620	30	3	A	DW																					
4	29	31/12/20	100 x 100 x 100	1600	618	1630	35	3.5	A	DW																					
5	29	31/12/20	100 x 100 x 100	1606	620	1630	32.6	3.3	A	DW																					
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Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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MMFB	Matrix missing from base	MC	Missing corner																												
Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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Dave Wain
Cube Technician

Form: RS47 Issue 1

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70142
Job No. : 47723
Issue date: 5/1/21

Location: Manchester																															
Date cast: 4/12/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 10/12/20 Delvd./Collected: Collected						Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 480 (mm) Additional Information:																									
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	7	11/12/20	100 x 100 x 100	1548	584	1610	10	1	A	DW	CC																				
2	7	11/12/20	100 x 100 x 100	1551	561	1570	16	1.6	A	DW	CC																				
3	14	18/12/20	100 x 100 x 100	1582	561	1550	20	2	A	DW																					
4	32	5/1/21	100 x 100 x 100	1629	611	1600	37	3.7	A	PJ																					
5	32	5/1/21	100 x 100 x 100	1605	599	1600	25	2.5	A	PJ																					
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Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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Signed:

Micheal Warmington
Lab Supervisor

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70143
Job No. : 47723
Issue date: 5/1/21

Location:		Manchester																													
Date cast: 7/12/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 10/12/20 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 500 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100																															
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				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	7	14/12/20	100 x 100 x 100	1514	582	1620	10.2	1	A	DW																					
2	7	14/12/20	100 x 100 x 100	1568	582	1590	11.2	1.1	A	DW																					
3	14	21/12/20	100 x 100 x 100	1578	559	1550	16	1.6	A	DW																					
4	29	5/1/21	100 x 100 x 100	1586	586	1590	30	3	A	PJ																					
5	29	5/1/21	100 x 100 x 100	1572	588	1600	22	2.2	A	PJ																					
6	Spare																														
Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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MMFB	Matrix missing from base	MC	Missing corner																												
Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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Micheal Warmington
Lab Supervisor

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70337
Job No. : 47723
Issue date: 5/1/21

Location:		Manchester																													
Date cast: 8/12/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 22/12/20 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 480 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	15	23/12/20	100 x 100 x 100	1448	538	1590	24	2.4	A	DW																					
2	15	23/12/20	100 x 100 x 100	1448	548	1610	23	2.3	A	DW																					
3	15	23/12/20	100 x 100 x 100	1464	560	1620	24	2.4	A	DW																					
4	28	5/1/21	100 x 100 x 100	1623	600	1590	28	2.8	A	PJ																					
5	28	5/1/21	100 x 100 x 100	1614	591	1580	31	3.1	A	PJ																					
6	Spare																														
Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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SV	Surface voids	PC	Poor compaction																												
MMFB	Matrix missing from base	MC	Missing corner																												
Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019
 Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012
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Micheal Warmington
Lab Supervisor

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70336
Job No. : 47723
Issue date: 7/1/21

Location:		Manchester																													
Date cast: 10/12/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 22/12/20 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 500 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	13	23/12/20	100 x 100 x 100	1571	561	1560	26	2.6	A	DW																					
2	13	23/12/20	100 x 100 x 100	1561	557	1550	23	2.3	A	DW																					
3	19	29/12/20	100 x 100 x 100	1460	528	1570	26	2.6	A	DW																					
4	28	7/1/21	100 x 100 x 100	1576	578	1580	30	3	A	DW																					
5	28	7/1/21	100 x 100 x 100	1589	590	1590	32	3.2	A	DW																					
6	Spare																														
Initial Curing: Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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RS	Rough surfaces	CR	Cube retained																												
SV	Surface voids	PC	Poor compaction																												
MMFB	Matrix missing from base	MC	Missing corner																												
Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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Dave Wain
Cube Technician

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70335
Job No. : 47723
Issue date: 11/1/21

Location:		Manchester																													
Date cast: 14/12/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 22/12/20 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 480 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	9	23/12/20	100 x 100 x 100	1600	580	1570	24	2.4	A	DW																					
2	9	23/12/20	100 x 100 x 100	1482	554	1600	18	1.8	A	DW																					
3	15	29/12/20	100 x 100 x 100	1477	526	1550	24	2.4	A	DW																					
4	28	11/1/21	100 x 100 x 100	1577	563	1560	25	2.5	A	MW																					
5	28	11/1/21	100 x 100 x 100	1569	551	1540	29	2.9	A	MW																					
6	Spare																														
Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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RS	Rough surfaces	CR	Cube retained																												
SV	Surface voids	PC	Poor compaction																												
MMFB	Matrix missing from base	MC	Missing corner																												
Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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Dave Wain
Cube Technician

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70334
Job No. : 47723
Issue date: 13/1/21

Location:		Manchester									
Date cast: 15/12/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 22/12/20 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 520 (mm) Additional Information:							
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100											

Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)				
				In Air	In Water						
1	8	23/12/20	100 x 100 x 100	1552	535	1530	22	2.2	A	DW	
2	8	23/12/20	100 x 100 x 100	1557	539	1530	19	1.9	A	DW	
3	14	29/12/20	100 x 100 x 100	1468	529	1560	22	2.2	A	DW	
4	28	12/1/21	100 x 100 x 100	1620	589	1570	27.2	2.7	A	DW	
5	28	12/1/21	100 x 100 x 100	1614	599	1590	26.7	2.7	A	DW	
6	Spare										

Initial Curing:

Laboratory curing: After demoulding / date recieved (if delivered or collected).
Cured in water at a temperature of 20°C ± 2°C until time of testing.

Defect abbreviations

CC	Chipped corners	FR	Fins removed
CE	Chipped edges	OoS	Out of square - unable to test
RS	Rough surfaces	CR	Cube retained
SV	Surface voids	PC	Poor compaction
MMFB	Matrix missing from base	MC	Missing corner

Surface conditions: Clean and free from excess moisture

Remarks on receipt: Satisfactory Sampling certificate: Yes

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019
 Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012
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Dave Wain
Cube Technician



LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70333
Job No. : 47723
Issue date: 13/1/21

Location:		Manchester																													
Date cast: 16/12/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 22/12/20 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 520 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	7	23/12/20	100 x 100 x 100	1552	535	1530	20	2	A	DW																					
2	7	23/12/20	100 x 100 x 100	1560	541	1530	23	2.3	A	DW																					
3	15	31/12/20	100 x 100 x 100	1560	600	1620	24.2	2.4	A	DW																					
4	28	13/1/21	100 x 100 x 100	1586	581	1580	23.8	2.4	A	DW																					
5	28	13/1/21	100 x 100 x 100	1583	580	1580	24.9	2.5	A	DW																					
6	Spare																														
Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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Dave Wain
Cube Technician

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LABORATORY TEST REPORT

COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70330
Job No. : 47723
Issue date: 14/1/21

Location: Manchester																															
Date cast: 17/12/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 22/12/20 Delvd./Collected: Collected				Mix No: Grout Mix Trial Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 1Kg (kg/m ³) Water Cement Ratio: 2.00 Cement Type: PFA Aggregate Size & Type: (mm) Admixture: Measured Slump: 460 (mm) Additional Information:																											
Supplier: Cemetation Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	12	29/12/20	100 x 100 x 100	1462	528	1570	13	1.3	A	DW																					
2	12	29/12/20	100 x 100 x 100	1467	529	1560	12	1.2	A	DW																					
3	14	31/12/20	100 x 100 x 100	1545	530	1520	20.6	2.1	A	DW																					
4	28	14/1/21	100 x 100 x 100	1590	576	1570	27	2.7	A	PS																					
5	28	14/1/21	100 x 100 x 100	1580	560	1550	25	2.5	A	PS																					
6	Spare																														
Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width: 100%; border: none;"> <tr> <td>CC</td> <td>Chipped corners</td> <td>FR</td> <td>Fins removed</td> </tr> <tr> <td>CE</td> <td>Chipped edges</td> <td>OoS</td> <td>Out of square - unable to test</td> </tr> <tr> <td>RS</td> <td>Rough surfaces</td> <td>CR</td> <td>Cube retained</td> </tr> <tr> <td>SV</td> <td>Surface voids</td> <td>PC</td> <td>Poor compaction</td> </tr> <tr> <td>MMFB</td> <td>Matrix missing from base</td> <td>MC</td> <td>Missing corner</td> </tr> </table>						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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SV	Surface voids	PC	Poor compaction																												
MMFB	Matrix missing from base	MC	Missing corner																												
						Surface conditions: Clean and free from excess moisture																									
Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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Micheal Warmington
Lab Supervisor

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70331
Job No. : 47723
Issue date: 14/1/21

Location:		Manchester																													
Date cast: 17/12/20 Made By: J Hamilton Time Cubes Made: PM Date Received: 22/12/20 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 480 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	12	29/12/20	100 x 100 x 100	1474	530	1560	14	1.4	A	DW																					
2	12	29/12/20	100 x 100 x 100	1478	531	1560	16	1.6	A	DW																					
3	14	31/12/20	100 x 100 x 100	1460	527	1560	19.2	1.9	A	DW																					
4	28	14/1/21	100 x 100 x 100	1635	615	1600	35	3.5	A	PS																					
5	28	14/1/21	100 x 100 x 100	1621	600	1590	31	3.1	A	PS																					
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Initial Curing: Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019
 Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012
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Micheal Warmington
Lab Supervisor

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70389
Job No. : 47723
Issue date: 2/2/21

Location:		Manchester																													
Date cast: 5/1/21 Made By: J Hamilton Time Cubes Made: PM Date Received: 6/1/21 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 480 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	7	12/1/21	100 x 100 x 100	1642	627	1620	17.7	1.8	A	DW																					
2	7	12/1/21	100 x 100 x 100	1634	610	1600	19.4	1.9	A	DW																					
3	14	19/1/21	100 x 100 x 100	1660	637	1620	22.8	2.3	A	DW																					
4	28	2/2/21	100 x 100 x 100	1644	640	1640	28.6	2.9	A	DW	CC																				
5	28	2/2/21	100 x 100 x 100	1627	614	1610	26.4	2.6	A	DW	CC																				
6	Spare																														
Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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Cube Technician

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70487
Job No. : 47723
Issue date: 3/2/21

Location:		Manchester																													
Date cast: 6/1/21 Made By: J Hamilton Time Cubes Made: PM Date Received: 14/1/21 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 510 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: PM Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	9	15/1/21	100 x 100 x 100	1601	587	1580	17	1.7	A	DW																					
2	9	15/1/21	100 x 100 x 100	1590	580	1570	18	1.8	A	DW																					
3	14	20/1/21	100 x 100 x 100	1583	593	1600	19	1.9	A	DW																					
4	14	20/1/21	100 x 100 x 100	1589	599	1610	18.6	1.9	A	DW																					
5	28	3/2/21	100 x 100 x 100	1602	615	1620	30.7	3.1	A	DW																					
6	Spare																														
Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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Cube Technician

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70486
Job No. : 47723
Issue date: 5/2/21

Location:		Manchester																													
Date cast: 8/1/21 Made By: J Hamilton Time Cubes Made: PM Date Received: 14/1/21 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 500 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: PM Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	7	15/1/21	100 x 100 x 100	606	591	40400	17	1.7	A	DW																					
2	7	15/1/21	100 x 100 x 100	1593	579	1570	19	1.9	A	DW																					
3	14	22/1/21	100 x 100 x 100	1619	622	1620	24.4	2.4	A	DW																					
4	28	5/2/21	100 x 100 x 100	1652	635	1620	33.9	3.4	A	DW																					
5	28	5/2/21	100 x 100 x 100	1649	641	1640	35.6	3.6	A	DW																					
6	Spare																														
Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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SV	Surface voids	PC	Poor compaction																												
MMFB	Matrix missing from base	MC	Missing corner																												
Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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Cube Technician

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70483
Job No. : 47723
Issue date: 8/2/21

Location:		Manchester																													
Date cast: 11/1/21 Made By: J Hamilton Time Cubes Made: PM Date Received: 14/1/21 Delvd./Collected: Collected				Mix No: Grout 6. Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 6.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 500 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: PM Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	7	18/1/21	100 x 100 x 100	1575	550	1540	11	1.1	A	BS																					
2	7	18/1/21	100 x 100 x 100	1581	559	1550	14	1.4	A	BS																					
3	14	25/1/21	100 x 100 x 100	1572	574	1580	21.9	2.2	A	DW																					
4	14	25/1/21	100 x 100 x 100	1580	578	1580	23.4	2.3	A	DW																					
5	28	8/2/21	100 x 100 x 100	1600	598	1600	29.8	3	A	DW																					
6	Spare																														
Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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CE	Chipped edges	OoS	Out of square - unable to test																												
RS	Rough surfaces	CR	Cube retained																												
SV	Surface voids	PC	Poor compaction																												
MMFB	Matrix missing from base	MC	Missing corner																												
Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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Cube Technician

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70604
Job No. : 47723
Issue date: 9/2/21

Location:		Manchester																													
Date cast: 12/1/21 Made By: J Hamilton Time Cubes Made: PM Date Received: 21/1/21 Delvd./Collected: Collected				Mix No: Grout 6.40 Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: (kg/m ³) Water Cement Ratio: 640.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 510 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	13	25/1/21	100 x 100 x 100	1575	550	1540	19.7	2	A	DW																					
2	13	25/1/21	100 x 100 x 100	1570	578	1580	18.3	1.8	A	DW																					
3	14	26/1/21	100 x 100 x 100	1576	577	1580	21	2.1	A	DW																					
4	14	26/1/21	100 x 100 x 100	1579	568	1560	21.4	2.1	A	DW																					
5	28	9/2/21	100 x 100 x 100	1566	542	1530	30.7	3.1	A	DW																					
6	Spare																														
Initial Curing: Curing by Client, No Information Available Laboratory curing: After demoulding / date recieved (if delivered or collected). Cured in water at a temperature of 20°C ± 2°C until time of testing.						Defect abbreviations <table style="width:100%; font-size: small;"> <tr> <td>CC</td><td>Chipped corners</td><td>FR</td><td>Fins removed</td></tr> <tr> <td>CE</td><td>Chipped edges</td><td>OoS</td><td>Out of square - unable to test</td></tr> <tr> <td>RS</td><td>Rough surfaces</td><td>CR</td><td>Cube retained</td></tr> <tr> <td>SV</td><td>Surface voids</td><td>PC</td><td>Poor compaction</td></tr> <tr> <td>MMFB</td><td>Matrix missing from base</td><td>MC</td><td>Missing corner</td></tr> </table> Surface conditions: Clean and free from excess moisture						CC	Chipped corners	FR	Fins removed	CE	Chipped edges	OoS	Out of square - unable to test	RS	Rough surfaces	CR	Cube retained	SV	Surface voids	PC	Poor compaction	MMFB	Matrix missing from base	MC	Missing corner
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SV	Surface voids	PC	Poor compaction																												
MMFB	Matrix missing from base	MC	Missing corner																												
Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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LABORATORY TEST REPORT
COMPRESSIVE STRENGTH OF CONCRETE CUBES

Client: Cementation Skanska
Site: Bradford Project (47723)
Order No: 50/M124517/00D992

Lab. Ref. No: CBR 70605
Job No. : 47723
Issue date: 10/2/21

Location:		Manchester																													
Date cast: 13/1/21 Made By: J Hamilton Time Cubes Made: PM Date Received: 21/1/21 Delvd./Collected: Collected				Mix No: Grout 6.40-300 Spec. Strength: 1 (N/mm ²) Spec. Slump: 400-600 (mm) Min. Cement Content: 300 (kg/m ³) Water Cement Ratio: 640.00 Cement Type: OPC Aggregate Size & Type: PFA (mm) Admixture: Measured Slump: 510 (mm) Additional Information:																											
Supplier: Cemeration Source: Secoma Mix Time Batched: Na Ticket No: Na Nominal Size: 100																															
Mark	Age Days	Test Date	Checked Measured size of cube (mm x mm x mm)	Saturated				Strength (N/mm ²)	Fail Type	Tested By	Remarks on Test																				
				Wt. of cube (g)		Density (Kg/m ³)	Ultimate load (kN)																								
				In Air	In Water																										
1	12	25/1/21	100 x 100 x 100	2577	578	1290	22.3	2.2	A	DW																					
2	12	25/1/21	100 x 100 x 100	1568	573	1580	20.4	2	A	DW																					
3	14	27/1/21	100 x 100 x 100	1649	628	1620	33.1	3.3	A	DW																					
4	14	27/1/21	100 x 100 x 100	1638	630	1620	28.4	2.8	A	DW																					
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Remarks on receipt: Satisfactory						Sampling certificate: Yes																									

Compressive strength of cubes in accordance with BS EN 12390-3: 2019 Cubes cured in accordance with BS EN 12390-2: 2019

Density of hardened concrete in accordance with BS EN 12390-7: 2019 Shape, Dimensions others in accordance with BS EN 12390-1: 2012

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