

concrete mix designs



رامدة القصيم
Ramah Alqassim
للبنك والخرسانة الجاهزة

مصنع رامدة القصيم للبنك والخرسانة الجاهزة

RAMAH-QMS-QP-10

إصدار رقم: ٠١

تاريخ الإصدار: ٢٠٢٣\٠٨\٠١

تاريخ المراجعة: ٠٠

CONCRETE MIX DESIGN BY ACI METHOD

Concrete Class C-400 Cylinder

Data For Design		Coarse Agg.	
Required Str. @ 28 days (cyl) Kg/cm ²	400.0	Nominal Max. size Agg. mm	19.0
Target Design Str (cyl.) kg/cm ²	425.0	Water Absorption. %	1.90
Cement factor (SRC/OPC) Kg/m ³	480.0	Moisture Content. %	0.60
Spec. Min. Cement Content. Kg/m ³	..	Sp. Gravity of Coarse Agg.	2.59
Water Content. Kgs	187.2	Rodded Bulk density Kg/m ³	1582
Used W/C Ratio	0.39		
Max. W/C Ratio as per ACI	0.43		
Air entrained. %	2.0		
Slump with Admixture, mm	120-20		
Admixture		Fine Agg. (Sand)	
Admixture Brand - Flocrete-DCP		Water Absorption. %	1.80
Flocrete RPC 15 @ 1 ltr/100 kg of Cement	4.8	Moisture Content. %	0.20
Hyperplast PC31B @ 0.8 ltr/100 kg of Cement	3.8	Sp. Gravity of Fine Agg.	2.53
		Fines modulus of F. Agg.	2.62
Adjusted Wt. of c. @ F. Agg. Due to Moisture		Absolute Volume Calculation, 1m ³	
Fine aggregate = Dry wt. of Fine agg X (100+M.C.)/100	655.0	Volume of Water. M ³	0.211
Coarse aggregate = Dry wt. of C. agg X (100+M.C.)/100	1000.0	Volume of Cement. M ³	0.152
Total water = Net water + ws. Of F. agg X (Abs-M.C.)/100 + WT. of C. agg X (Abs-M.C.)/100	210.7	Volume of C. Agg. M ³	0.386
Batch Weight Adjusted For Trials		Volume of Fine Agg. (Sand) M ³	0.259
Cement Content. Kgs	480.0	Volume of Entrapped Air. M ³	0.020
Water Content. Kgs	210.7	Volume of Admixture. M ³	0.009
Coarse Aggregate. Kgs	1000.0	Total Volume. M ³	1.037
Fine Aggregate. Kgs	655.0		
Flocrete RPC15. ltr	4.8		
Hyperplast PC31B . Ltr	3.8		
Total wt. kgs	2354.3		

Q.C. Manager:
Abdelrhman Sobhi



concrete mix designs



Arab Company الشركة العربية
For Laboratories and Soil المختبرات والتربة

ARAB COMPANY FOR LABORATORIES & SOIL
Compressive Strength of Concrete Cylinder

Owner	N F	Report No.	BH.AMC25006150 @ 7
Consultant	N F		
Contractor	Ramah Alqassim Factory for Blocks and Ready-Mix Concrete	Moisture Condition	Saturated
Project Name	Private	Dimensions	Checked
Project Location	Qassim	Curing Condition	Standard Cured
		Nominal Size	150*300 mm
Curing Temp.	23±2	Volume Determination	By Calculation
Test Method	ASTM C39-23	Tested By	Zeshan,RY -1621
Condition of Sample	Good	Sample Brought in By	Jaber RY 1142
Place of Sample/Cast	Site	Source	Ramah Alqassim RMC
Sampling Method	ASTM C31-23	Date Reported	10/05/2025
Sampled By	Jaber RY 1142	Date Of Sampling/ Time	03/05/2025
Structure Reference	Trial Mix	Grade of Concrete	C - 40 MPa (OPC)
No. of Cylinders	3	Method of Compaction	MANUAL
Castling Date	03/05/2025	Equip. Of Compaction	COMPACTING ROD

Cyl. No.	Date		Test Age (Days)	Dimensions	Sample Weight (gm)	Density (g/cm ³)	Load (KN)	Compressive Strength				Type of Fracture
	Cast	Tested						(N/mm ²)		(Kg/Cm ²)		
1	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12830	2.420	712.3	40.3		411.1		Satisfactory -Type 2
3	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12836	2.421	724.5	41.0	40.8	418.2	415.7	Satisfactory -Type 2
5	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12847	2.423	723.9	41.0		417.8		Satisfactory -Type 2

Remarks:	<p>Specified Strength: 40 MPa (OPC). Note 1- Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES.</p> <p>2- The laboratory responsible for all the information provided in the report.</p> <p>3- Decision rule is simple acceptance criteria.</p>
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Materials Department Manager - Riyadh
Arab Company for Laboratories and Soil



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شركة ذات مسؤولية محدودة رأس المال ٥.٦٦٢.٥٠٠.٠٠٠

concrete mix designs

Owner	N.F	Report No.	BH.MMC25006150 # 2B
Consultant	N.F		
Contractor	Ramah Alqassim Factory for Blocks and Ready-Mix Concrete	Moisture Condition	Saturated
Project Name	Private	Dimensions	Checked
Project Location	Qassim	Curing Condition	Standard Cured
Curing Temp.	23±2	Nominal Size	150*300 mm
Test Method	ASTM C39-23	Volume Determination	By Calculation
Condition of Sample	Good	Tested By	Zeshan.RY -1621
Place of Sample/Cast	Site	Sample Brought in By	Jaber RY 1142
Sampling Method	ASTM C31-23	Source	Ramah Alqassim RMC
Sampled By	Jaber RY 1142	Date Reported	31/05/2025
Structure Reference	Trial Mix	Date Of Sampling/ Time	03/05/2025
No. of Cylinders	3	Grade of Concrete	C - 40 MPa (OPC)
Castling Date	03/05/2025	Method of Compaction	MANUAL
		Equip. Of Compaction	COMPACTING ROD

Cyl. No.	Date		Test Age (Days)	Dimensions	Sample Weight (gm)	Density (g/cm ³)	Load (KN)	Compressive Strength				Type of Fracture
	Cast	Tested						(N/mm ²)		(Kg/Cm ²)		
								Cal.	Group Avg	Cal.	Group Avg	
2	3/5/2025	31/5/2025	28	D= 15.00 L= 30.00	12913	2.436	860.2	48.7		496.5		Satisfactory -Type 2
4	3/5/2025	31/5/2025	28	D= 15.00 L= 30.00	12902	2.434	871.5	49.3	49.0	503.0	499.4	Satisfactory -Type 2
6	3/5/2025	31/5/2025	28	D= 15.00 L= 30.00	12896	2.433	863.8	48.9		498.6		Satisfactory -Type 2

Remarks:	Specified Strength: 40 MPa (OPC). Note 1- Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES. 2- The laboratory responsible for all the information provided in the report. 3- Decision rule is simple acceptance criteria.
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concrete mix designs



رامة القصيم
Ramah Alqassim
للبنك والخرسانة الجاهزة

مصنع رامة القصيم للبنك والخرسانة الجاهزة

RAMAH-QMS-QP-10

إصدار رقم: ٠١

تاريخ الإصدار: ٢٠٢٣/٠٨/٠١

تاريخ المراجعة: ٠٠

CONCRETE MIX DESIGN BY ACI METHOD

Concrete Class C-350 Cylinder

Data For Design		Coarse Agg.	
Required Str. @ 28 days (cyl). Kg/cm2	350.0	Nominal Max. size Agg.mm	19.0
Target Design Str.(cyl.) kg/cm2	385.0	Water Absorption. %	1.90
Cement factor (SRC/OPC). Kg/m3	450.0	Moisture Content. %	0.60
Spec.Min. Cement Content. Kg/m3	..	Sp.Gravity of Coarse Agg.	2.59
Water Content. Kgs	180.0	Rodded Bulk density. Kg/m3	1582
Used W/C Ratio	0.40		
Max. W/C Ration as per ACI	0.46		
Air enterained. %	2.0		
Slump with Admixture, mm	120:20		
Admixture		Fine Agg. (Sand)	
Admixture Brand - Flocrete-DCP		Water Absorption. %	1.80
Flocrete RPC 15 @ 1 ltr/100 kg of Cement	4.5	Moisture Content. %	0.20
Hyperplast PC31B @ 0.8 ltr/100 kg of Cement	3.6	Sp.Gravity of Fine Agg.	2.53
		Finess modulus of F.Agg.	2.62
Adjusted Wt. of c. @ F. Agg. Due to Moisture		Absolute Volume Calculation, 1m3	
Fine aggregate = Dry wt. of Fine agg X (100+M.C.)/100	655.0	Volume of Water. M3	0.203
Coarse aggregate = Dry wt. of C. agg X (100+M.C.)/100	1000.0	Volume of Cement. M3	0.143
Total water = Net water + ws. Of F. agg X(Abs-M.C.)/100 + WT. of C. agg. X (Abs-M.C.)/100	203.5	Volume of C. Agg. M3	0.386
		Volume of Fine Agg. (Sand). M3	0.259
Batch Weight Adjusted For Trials		Volume of Enteraped Air. M3	0.020
Cement Content. Kgs	450.0	Volume of Admixture. M3	0.008
Water Content. Kgs	203.5	Total Volume. M3	1.019
Coarse Aggregate. Kgs	1000.0		
Fine Aggregate. Kgs	655.0		
Flocrete RPC15. ltr	4.5		
Hyperplast PC31B . Ltr	3.6		
Total wt. kgs	2316.6		

Q.C Manager:
Abdelrhman Sobhi



concrete mix designs



Arab Company الشركة العربية
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ARAB COMPANY FOR LABORATORIES & SOIL
Compressive Strength of Concrete Cylinder

Owner	N.P	Report No.	BH.MMC25006151 @ 7
Consultant	N.P		
Contractor	Ramah Alqassim Factory for Blocks and Ready-Mix Concrete	Moisture Condition	Saturated
Project Name	Private	Dimensions	Checked
Project Location	Qassim	Curing Condition	Standard Cured
Curing Temp.	23±2	Nominal Size	150*300 mm
Test Method	ASTM C39-23	Volume Determination	By Calculation
Condition of Sample	Good	Tested By	Zeshan.RY - 1621
Place of Sample/Cast	Site	Sample Brought In By	Jaber RY 1142
Sampling Method	ASTM C31-23	Source	Ramah Alqassim RMC
Sampled By	Jaber RY 1142	Date Reported	10/05/2025
Structure Reference	Trial Mix	Date Of Sampling/ Time	03/05/2025
No. of Cylinders	3	Grade of Concrete	C - 35 MPa (OPC)
Castling Date	03/05/2025	Method of Compaction	MANUAL
		Equip. Of Compaction	COMPACTING ROD

Cyl. No.	Date		Test Age (Days)	Dimensions	Sample Weight (gm)	Density (g/cm ³)	Load (KN)	Compressive Strength				Type of Fracture
	Cast	Tested						(N/mm ²)		(Kg/Cm ²)		
1	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12816	2.417	671.4	38.0		387.5		Satisfactory -Type 2
3	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12759	2.407	683.5	38.7	38.6	394.5	393.5	Satisfactory -Type 2
5	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12716	2.399	690.5	39.1		398.6		Satisfactory -Type 2

Remarks:	<p>Specified strength: 35 MPa (OPC). Note 1- Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES.</p> <p>2- The laboratory responsible for all the information provided in the report.</p> <p>3- Decision rule is simple acceptance criteria.</p>
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شركة ذات مسؤولية محدودة رأس المال ٥.٦٦٢.٥٠٠.٠٠٠

concrete mix designs

Owner	N P	Report No.	BH.MMC25006151 @ 28
Consultant	N P		
Contractor	Ramah Alqassim Factory for Blocks and Ready-Mix Concrete	Moisture Condition	Saturated
Project Name	Private	Dimensions	Checked
Project Location	Qassim	Curing Condition	Standard Cured
Curing Temp.	23±2	Nominal Size	150*300 mm
Test Method	ASTM C39-23	Volume Determination	By Calculation
Condition of Sample	Good	Tested By	Zeshan.RY - 1621
Place of Sample/Cast	Site	Sample Brought In By	Jaber RY 1142
Sampling Method	ASTM C31-23	Source	Ramah Alqassim RMC
Sampled By	Jaber RY 1142	Date Reported	31/05/2025
Structure Reference	Trial Mix	Date Of Sampling/ Time	03/05/2025
No. of Cylinders	3	Grade of Concrete	C - 35 MPa (OPC)
Casting Date	03/05/2025	Method of Compaction	MANUAL
		Equip. Of Compaction	COMPACTING ROD

Cyl. No.	Date		Test Age (Days)	Dimensions	Sample Weight (gm)	Density (g/cm ³)	Load (KN)	Compressive Strength				Type of Fracture
	Cast	Tested						(N/mm ²)		(Kg/Cm ²)		
								Cal.	Group Avg.	Cal.	Group Avg.	
2	3/5/2025	31/5/2025	28	D= 15.00	12826	2.419	724.6	41.0	41.1	418.2	419.6	Satisfactory -Type 2
				L= 30.00								
4	3/5/2025	31/5/2025	28	D= 15.00	12847	2.423	720.7	40.8	41.1	416.0	419.6	Satisfactory -Type 2
				L= 30.00								
6	3/5/2025	31/5/2025	28	D= 15.00	12855	2.425	735.6	41.6	41.1	424.6	419.6	Satisfactory -Type 2
				L= 30.00								

Remarks: Specified Strength: 35 MPa (OPC); Note 1- Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES.
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concrete mix designs



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Ramah Alqassim
للبيك والخرسانة الجاهزة

مصنع رامة القصيم للبيك والخرسانة الجاهزة

RAMAH-QMS-QP-10

إصدار رقم: ٠١

تاريخ الإصدار: ٢٠٢٣/٠٨/٠١

تاريخ المراجعة: ٠٠

CONCRETE MIX DESIGN BY ACI METHOD

Concrete Class C-300 Cylinder

Data For Design		Coarse Agg.	
Required Str. @ 28 days (cyl). Kg/cm2	300.0	Nominal Max. size Agg mm	19.0
Target Design Str.(cyl.) kg/cm2	350.0	Water Absorption %	1.90
Cement factor (SRC/OPC). Kg/m3	400.0	Moisture Content. %	0.60
Spec.Min. Cement Content. Kg/m3	..	Sp.Gravity of Coarse Agg	2.59
Water Content. Kgs	164.0	Rodded Bulk density. Kg/m3	1582
Used W/C Ratio	0.41		
Max. W/C Ratio as per ACI	0.48		
Air entered. %	2.0		
Slump with Admixture, mm	120±20		
Admixture		Fine Agg. (Sand)	
Admixture Brand - Flocrete-DCP		Water Absorption. %	1.80
Flocrete RPC 15 @ 1 ltr/100 kg of Cement	4.0	Moisture Content. %	0.20
Hyperplast PC31B @ 0.8 ltr/100 kg of Cement	3.2	Sp.Gravity of Fine Agg.	2.53
		Fines modulus of F.Agg.	2.62
Adjusted Wt. of c. @ F. Agg. Due to Moisture		Absolute Volume Calculation, 1m3	
Fine aggregate = Dry wt. of Fine agg X (100+M.C.)/100	710.0	Volume of Water. M3	0.188
Coarse aggregate = Dry wt. of C. agg X (100+M.C.)/100	1000.0	Volume of Cement. M3	0.127
Total water = Net water + ws. Of F. agg X(Abs-M.C.)/100 + WT. of C. agg. X (Abs-M.C.)/100	188.4	Volume of C. Agg. M3	0.386
Batch Weight Adjusted For Trials		Volume of Fine Agg. (Sand). M3	0.281
Cement Content. Kgs	400.0	Volume of Entered Air. M3	0.020
Water Content. Kgs	188.4	Volume of Admixture. M3	0.007
Coarse Aggregate. Kgs	1000.0	Total Volume. M3	1.009
Fine Aggregate. Kgs	710.0		
Flocrete RPC15. ltr	4.0		
Hyperplast PC31B . Ltr	3.2		
Total wt. kgs	2305.6		

Q.C. Manager
Abdelrhman Sobhi



concrete mix designs



Owner	N.P	Report No.	BH.MMC25006152 @ 7
Consultant	N.P		
Contractor	Ramah Alqassim Factory for Blocks and Ready-Mix Concrete	Moisture Condition	Saturated
Project Name	Private	Dimensions	Checked
Project Location	Qassim	Curing Condition	Standard Cured
		Nominal Size	150*300 mm
Curing Temp.	23±2	Volume Determination	By Calculation
Test Method	ASTM C39-23	Tested By	Zeshan.RY -1421
Condition of Sample	Good	Sample Brought in By	Jaber RY 1142
Place of Sample/Cast	Site	Source	Ramah Alqassim RMC
Sampling Method	ASTM C31-23	Date Reported	10/05/2025
Sampled By	Jaber RY 1142	Date Of Sampling/ Time	03/05/2025
Structure Reference	Trial Mix	Grade of Concrete	C - 30 MPa (OPC)
No. of Cylinders	3	Method of Compaction	MANUAL
Castling Date	03/05/2025	Equip. Of Compaction	COMPACTING ROD

Cyl. No.	Date		Test Age (Days)	Dimensions	Sample Weight (gm)	Density (g/cm ³)	Load (KN)	Compressive Strength				Type of Fracture
	Cast	Tested						(N/mm ²)		(Kg/Cm ²)		
								Cal.	Group Avg.	Cal.	Group Avg.	
1	3/5/2025	10/5/2025	7	D= 15.00	12639	2.384	535.3	30.3		309.0		Satisfactory -Type 2
				L= 30.00								
3	3/5/2025	10/5/2025	7	D= 15.00	12652	2.387	561.5	31.8	31.1	324.1	316.7	Satisfactory -Type 2
				L= 30.00								
5	3/5/2025	10/5/2025	7	D= 15.00	12648	2.386	549.5	31.1		317.2		Satisfactory -Type 2
				L= 30.00								

Remarks:	<p>Specified Strength: 30 MPa (OPC). Note 1- Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES.</p> <p>2- The laboratory responsible for all the information provided in the report.</p> <p>3- Decision rule is simple acceptance criteria.</p>
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شركة ذات مسؤولية محدودة رأس المال ٥.٦٦٢.٥٠٠.٠٠٠

concrete mix designs

Owner	N.P	Report No.	BH.MMC25006152 @ 28
Consultant	N.P		
Contractor	Ramah Alqassim Factory for Blocks and Ready-Mix Concrete	Moisture Condition	Saturated
Project Name	Private	Dimensions	Checked
Project Location	Qassim	Curing Condition	Standard Cured
Curing Temp.	23±2	Nominal Size	150*300 mm
Test Method	ASTM C39-23	Volume Determination	By Calculation
Condition of Sample	Good	Tested By	Zeshan.RY -1621
Place of Sample/Cast	Site	Sample Brought In By	Jaber RY 1142
Sampling Method	ASTM C31-23	Source	Ramah Alqassim RMC
Sampled By	Jaber RY 1142	Date Reported	31/05/2025
Structure Reference	Trial Mix	Date Of Sampling/ Time	03/05/2025
No. of Cylinders	3	Grade of Concrete	C - 30 MPa (OPC)
Castling Date	03/05/2025	Method of Compaction	MANUAL
		Equip. Of Compaction	COMPACTING ROD

Cyl. No.	Date		Test Age (Days)	Dimensions	Sample Weight (gm)	Density (g/cm³)	Load (KN)	Compressive Strength				Type of Fracture
	Cast	Tested						(N/mm²)		(Kg/Cm²)		
2	3/5/2025	31/5/2025	28	D= 15.00	12699	2.395	672.5	38.1	388.2	389.0	Satisfactory -Type 2	
				L= 30.00								
4	3/5/2025	31/5/2025	28	D= 15.00	12675	2.391	660.8	37.4	381.4	397.3	Satisfactory -Type 2	
				L= 30.00								
6	3/5/2025	31/5/2025	28	D= 15.00	12653	2.387	688.4	39.0	397.3	389.0	Satisfactory -Type 2	
				L= 30.00								

Remarks:	Specified Strength: 30 MPa (OPC); Note 1- Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES. 2- The laboratory responsible for all the information provided in the report. 3- Decision rule is simple acceptance criteria.
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شركة ذات مسؤولية محدودة رأس المال ٥.٦٦٢.٥٠٠.٠٠٠

concrete mix designs



راماة القصيم
Ramah Alqassim

مصنع راماة القصيم للبتك والخرسانة الجاهزة
للبتك والخرسانة الجاهزة

RAMAH-QMS-QP-10

إصدار رقم: ٠١

تاريخ الإصدار: ٢٠٢٣/٠٨/٠١

تاريخ المراجعة: ٠٠

CONCRETE MIX DESIGN BY ACI METHOD

Concrete Class C-250 Cylinder

Data For Design		Coarse Agg.	
Required Str. @ 28 days (cyl). Kg/cm2	250.0	Nominal Max. size Agg mm	19.0
Target Design Str.(cyl.) kg/cm2	300.0	Water Absorption. %	1.90
Cement factor (SRC/OPC). Kg/m3	350.0	Moisture Content. %	0.60
Spec.Min. Cement Content. Kg/m3	..	Sp.Gravity of Coarse Agg.	2.59
Water Content. Kgs	157.5	Rodded Bulk density. Kg/m3	1582
Used W/C Ratio	0.45		
Max. W/C Ration as per ACI	0.05		
Air enterained. %	2.0		
Slump with Admixture, mm	120±20		
Admixture		Fine Agg. (Sand)	
Admixture Brand - Flocrete-DCP		Water Absorption. %	1.80
Flocrete RPC 15 @ 1 ltr/100 kg of Cement	3.5	Moisture Content. %	0.20
Hyperplast PC31B @ 1.4 ltr/100 kg of Cement	3.0	Sp.Gravity of Fine Agg	2.53
		Finess modulus of F Agg	2.62
Adjusted Wt. of c. @ F. Agg. Due to Moisture		Absolute Volume Calculation, 1m3	
Fine aggregate = Dry wt. of Fine agg X (100+M.C.)/100	780.0	Volume of Water. M3	0.183
Coarse aggregate = Dry wt. of C. agg X (100+M.C.)/100	1000.0	Volume of Cement. M3	0.111
Total water = Net water + ws. Of F. agg X(Abs-M.C.)/100 + WT. of C. agg. X (Abs-M.C.)/100	183.0	Volume of C. Agg. M3	0.386
Batch Weight Adjusted For Trials		Volume of Fine Agg. (Sand). M3	0.308
Cement Content. Kgs	350.0	Volume of Enteraped Air. M3	0.020
Water Content. Kgs	183.0	Volume of Admixture. M3	0.007
Coarse Aggregate. Kgs	1000.0	Total Volume. M3	1.015
Fine Aggregate. Kgs	780.0		
Flocrete RPC15. ltr	3.5		
Hyperplast PC31B . Ltr	3.0		
Total wt. kgs	2319.5		

Q.C Manager
Abdelrhman Sobhi



concrete mix designs



Arab Company العربية
For Laboratories and Soil للمختبرات والتربة

ARAB COMPANY FOR LABORATORIES & SOIL Compressive Strength of Concrete Cylinder

Owner	N.P	Report No.	BH MMC25006153 @ 7
Consultant	N.P		
Contractor	Ramah Alqassim Factory for Blocks and Ready-Mix Concrete	Moisture Condition	Saturated
Project Name	Private	Dimensions	Checked
Project Location	Qassim	Curing Condition	Standard Cured
Curing Temp.	23±2	Nominal Size	150*300 mm
Test Method	ASTM C39-23	Volume Determination	By Calculation
Condition of Sample	Good	Tested By	Zeshan.RY - 1621
Place of Sample/Cast	Site	Sample Brought in By	Jaber RY 1142
Sampling Method	ASTM C31-23	Source	Ramah Alqassim RMC
Sampled By	Jaber RY 1142	Date Reported	10/05/2025
Structure Reference	Trial Mix	Date Of Sampling/ Time	03/05/2025
No. of Cylinders	3	Grade of Concrete	C - 25 MPa (OPC)
Castling Date	03/05/2025	Method of Compaction	MANUAL
		Equip. Of Compaction	COMPACTING ROD

Cyl. No.	Date		Test Age (Days)	Dimensions	Sample Weight (gm)	Density (g/cm ³)	Load (KN)	Compressive Strength				Type of fracture
	Cast	Tested						(N/mm ²)		(Kg/Cm ²)		
1	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12548	2.367	462.3	26.2		266.8		Satisfactory -Type 2
3	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12556	2.368	465.5	26.3	26.4	268.7	269.2	Satisfactory -Type 2
5	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12547	2.367	471.5	26.7		272.2		Satisfactory -Type 2

Remarks:	<p>Specified Strength 25 MPa (OPC). Note 1- Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES.</p> <p>2- The laboratory responsible for all the information provided in the report.</p> <p>3- Decision rule is simple acceptance criteria.</p>
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Materials Department Manager –Riyadh
Arab Company for Laboratories and Soil



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شركة ذات مسؤولية محدودة رأس المال ٥.٦٦٢.٥٠٠.٠٠٠

concrete mix designs

Owner	N.P	Report No.	BH.MMC25006153 @ 28
Consultant	N.P		
Contractor	Ramah Alqassim Factory for Blocks and Ready-Mix Concrete	Moisture Condition	Saturated
Project Name	Private	Dimensions	Checked
Project Location	Qassim	Curing Condition	Standard Cured
		Nominal Size	150*300 mm
Curing Temp	23±2	Volume Determination	By Calculation
Test Method	ASTM C39-23	Tested By	Zeshan.RY - 1621
Condition of Sample	Good	Sample Brought in By	Jaber RY 1142
Place of Sample/Cast	Site	Source	Ramah Alqassim RMC
Sampling Method	ASTM C31-23	Date Reported	31/05/2025
Sampled By	Jaber RY 1142	Date Of Sampling/ Time	03/05/2025
Structure Reference	Trial Mix	Grade of Concrete	C - 25 MPa (OPC)
No. of Cylinders	3	Method of Compaction	MANUAL
Casting Date	03/05/2025	Equip. Of Compaction	COMPACTING ROD

Cyl. No.	Date		Test Age (Days)	Dimensions	Sample Weight (gm)	Density (g/cm ³)	Load (KN)	Compressive Strength				Type of Fracture
	Cast	Tested						(N/mm ²)		(Kg/Cm ²)		
			Cal.	Group Avg.	Cal.	Group Avg.						
2	3/5/2025	31/5/2025	28	D= 15.00 L= 30.00	12588	2.374	515.0	29.1		297.3		Satisfactory -Type 2
4	3/5/2025	31/5/2025	28	D= 15.00 L= 30.00	12574	2.372	523.6	29.6	29.9	302.2	305.2	Satisfactory -Type 2
6	3/5/2025	31/5/2025	28	D= 15.00 L= 30.00	12600	2.377	547.6	31.0		316.1		Satisfactory -Type 2

Remarks:	Specified Strength: 25 MPa (OPC): Note 1- Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES. 2- The laboratory responsible for all the information provided in the report. 3- Decision rule is simple acceptance criteria
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Materials Department Manager - Riyadh
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شركة ذات مسؤولية محدودة رأس المال ٥.٦٦٢.٥٠٠.٠٠٠

concrete mix designs



رامة القصيم
Ramah Alqassim
للبيك والخرسانة الجاهزة

مصنع رامة القصيم للبيك والخرسانة الجاهزة

RAMAH-QMS-QP-10

إصدار رقم: ٠١

تاريخ الإصدار: ٢٠٢٣\٠٨\٠١

تاريخ المراجعة: ٠٠

CONCRETE MIX DESIGN BY ACI METHOD

Concrete Class C-200 Cylinder

Data For Design		Coarse Agg.	
Required Str. @ 28 days (cyl). Kg/cm ²	200.0	Nominal Max. size Agg mm	19.0
Target Design Str.(cyl.) kg/cm ²	250.0	Water Absorption. %	1.90
Cement factor (SRC/OPC) Kg/m ³	300.0	Moisture Content. %	0.60
Spec.Min. Cement Content. Kg/m ³	..	Sp Gravity of Coarse Agg	2.59
Water Content. Kgs	156.0	Rodded Bulk density. Kg/m ³	1582
Used W/C Ratio	0.52		
Max. W/C Ration as per ACI	0.62		
Air entrained. %	2.0		
Slump with Admixture, mm	120±20		
Admixture		Fine Agg. (Sand)	
Admixture Brand - Flocrete-DCP		Water Absorption. %	1.80
Flocrete RPC 15 @ 1 ltr/100 kg of Cement	3.0	Moisture Content. %	0.20
Hyperplast PC31B @ 0.8 ltr/100 kg of Cement	2.4	Sp Gravity of Fine Agg.	2.53
		Finess modulus of F.Agg.	2.63
Adjusted Wt. of c. @ F. Agg. Due to Moisture		Absolute Volume Calculation, 1m ³	
Fine aggregate = Dry wt. of Fine agg X (100+M.C.)/100	825.0	Volume of Water. M ³	0.182
Coarse aggregate = Dry wt. of C. agg X (100+M.C.)/100	1000.0	Volume of Cement. M ³	0.095
Total water = Net water + ws. Of F. agg X(Abs-M.C.)/100 + WT. of C. agg X (Abs-M.C.)/100	182.2	Volume of C. Agg. M ³	0.386
Batch Weight Adjusted For Trials		Volume of Fine Agg. (Sand) M ³	0.326
Cement Content. Kgs	300.0	Volume of Enteraped Air. M ³	0.020
Water Content. Kgs	182.2	Volume of Admixture. M ³	0.005
Coarse Aggregate. Kgs	1000.0	Total Volume. M ³	1.015
Fine Aggregate. Kgs	825.0		
Flocrete RPC15. ltr	3.0		
Hyperplast PC31B . Ltr	2.4		
Total wt. kgs	2312.6		



concrete mix designs



Arab Company العربية
For Laboratories and Soil المختبرات والتربة

ARAB COMPANY FOR LABORATORIES & SOIL
Compressive Strength of Concrete Cylinder

Owner	N.P	Report No.	BH.MMC25006154 @ 7
Consultant	N.P		
Contractor	Ramah Alqassim Factory for Blocks and Ready-Mix Concrete	Moisture Condition	Saturated
Project Name	Private	Dimensions	Checked
Project Location	Qassim	Curing Condition	Standard Cured
Curing Temp.	23±2	Nominal Size	150*300 mm
Test Method	ASTM C39-23	Volume Determination	By Calculation
Condition of Sample	Good	Tested By	Zeshan.RY - 1421
Place of Sample/Cast	Site	Sample Brought in By	Jaber RY 1142
Sampling Method	ASTM C31-23	Source	Ramah Alqassim RMC
Sampled By	Jaber RY 1142	Date Reported	10/05/2025
Structure Reference	Trial Mix	Date Of Sampling/ Time	03/05/2025
No. of Cylinders	3	Grade of Concrete	C - 20 MPa (OPC)
Castling Date	03/05/2025	Method of Compaction	MANUAL
		Equip. Of Compaction	COMPACTING ROD

Cyl. No.	Date		Test Age (Days)	Dimensions	Sample Weight (gm)	Density (g/cm ³)	Load (KN)	Compressive Strength				Type of Fracture
	Cast	Tested						(N/mm ²)		(Kg/Cm ²)		
								Cal.	Group Avg.	Cal.	Group Avg.	
1	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12414	2.342	350.5	19.8		202.3		Satisfactory -Type 2
3	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12446	2.348	360.4	20.4	20.2	208.0	206.3	Satisfactory -Type 2
5	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12458	2.350	361.2	20.4		208.5		Satisfactory -Type 2

Remarks: Specified Strength: 20 MPa (OPC) Note 1 - Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES.
2 - The laboratory responsible for all the information provided in the report.
3 - Decision rule is simple acceptance criteria.

Materials Department Manager - Riyadh
Arab Company for Laboratories and Soil



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شركة ذات مسؤولية محدودة رأس المال ٥.٦٦٢.٥٠٠.٠٠٠

concrete mix designs



Arab Company الشركة العربية
For Laboratories and Soil للمختبرات والتربة

ARAB COMPANY FOR LABORATORIES & SOIL
Compressive Strength of Concrete Cylinder

Owner	N.P	Report No.	BH.MMC25006154 @ 28
Consultant	N.P		
Contractor	Ramah Alqassim Factory for Blocks and Ready-Mix Concrete	Moisture Condition	Saturated
Project Name	Private	Dimensions	Checked
Project Location	Gassim	Curing Condition	Standard Cured
Curing Temp.	23±2	Nominal Size	150*300 mm
Test Method	ASTM C39-23	Volume Determination	By Calculation
Condition of Sample	Good	Tested By	Zeshan.RY - 1621
Place of Sample/Cast	Site	Sample Brought In By	Jaber RY 1142
Sampling Method	ASTM C31-23	Source	Ramah Alqassim RMC
Sampled By	Jaber RY 1142	Date Reported	31/05/2025
Structure Reference	Trial Mix	Date Of Sampling/ Time	03/05/2025
No. of Cylinders	3	Grade of Concrete	C - 20 MPa (OPC)
Cast Date	03/05/2025	Method of Compaction	MANUAL
		Equip. Of Compaction	COMPACTING ROD

Cyl. No.	Date		Test Age (Days)	Dimensions	Sample Weight (gm)	Density (g/cm ³)	Load (KN)	Compressive Strength				Type of Fracture
	Cast	Tested						(N/mm ²)		(Kg/Cm ²)		
	Cal.	Group Avg.	Cal.	Group Avg.								
2	3/5/2025	31/5/2025	28	D= 15.00	12512	2.360	476.5	27.0	27.4	275.0	279.8	Satisfactory -Type 2
				L= 30.00								
4	3/5/2025	31/5/2025	28	D= 15.00	12487	2.355	488.2	27.6	27.7	282.6	279.8	Satisfactory -Type 2
				L= 30.00								
6	3/5/2025	31/5/2025	28	D= 15.00	12546	2.367	489.6	27.7	27.7	282.6	279.8	Satisfactory -Type 2
				L= 30.00								

Remarks:	<p>Specified Strength: 20 MPa (OPC). Note 1- Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES.</p> <p>2- The laboratory responsible for all the information provided in the report.</p> <p>3- Decision rule is simple acceptance criteria.</p>
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Materials Department Manager - Riyadh
Arab Company for Laboratories and Soil



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شركة ذات مسؤولية محدودة رأس المال ٥.٦٦٢.٥٠٠.٠٠٠

concrete mix designs



رامدة القصيم
Ramah Alqassim
للبنك والخرسانة الجاهزة

مصنع رامدة القصيم للبنك والخرسانة الجاهزة

RAMAH-QMS-QP-10

إصدار رقم: ٠١

تاريخ الإصدار: ٢٠٢٣\٠٨\٠١

تاريخ المراجعة: ٠٠

CONCRETE MIX DESIGN BY ACI METHOD

Concrete Class C-150 Cylinder

Data For Design		Coarse Agg.	
Required Str. @ 28 days (cyl). Kg/cm2	150.0	Nominal Max. size Agg. mm	19.0
Target Design Str. (cyl.) kg/cm2	200.0	Water Absorption. %	1.90
Cement factor (SRC/OPC). Kg/m3	250.0	Moisture Content. %	0.60
Spec. Min. Cement Content. Kg/m3	..	Sp. Gravity of Coarse Agg.	2.59
Water Content. Kgs	145.0	Rodded Bulk density Kg/m3	1582
Used W/C Ratio	0.58		
Max. W/C Ratio as per ACI	0.70		
Air entrained. %	2.0		
Slump with Admixture, mm	120±20		
Admixture		Fine Agg. (Sand)	
Admixture Brand - Flocrete-DCP		Water Absorption. %	1.80
Flocrete RPC 15 @ 1 ltr/100 kg of Cement	3.0	Moisture Content. %	0.22
Hyperplast PC31B @ 0.8 ltr/100 kg of Cement	2.4	Sp. Gravity of Fine Agg.	2.53
		Fines modulus of F. Agg.	2.62
Adjusted Wt. of c. @ F. Agg. Due to Moisture		Absolute Volume Calculation, 1m3	
Fine aggregate = Dry wt. of Fine agg X (100+M.C.)/100	865.0	Volume of Water. M3	0.172
Coarse aggregate = Dry wt. of C. agg X (100+M.C.)/100	1000.0	Volume of Cement. M3	0.079
Total water = Net water + ws. Of F. agg X (Abs-M.C.)/100 + WT. of C. agg X (Abs-M.C.)/100	171.7	Volume of C. Agg. M3	0.386
		Volume of Fine Agg. (Sand). M3	0.342
Batch Weight Adjusted For Trials		Volume of Entrapped Air. M3	0.020
Cement Content. Kgs	250.0	Volume of Admixture. M3	0.005
Water Content. Kgs	171.7	Total Volume. M3	1.004
Coarse Aggregate. Kgs	1000.0		
Fine Aggregate. Kgs	865.0		
Flocrete RPC15. ltr	3.0		
Hyperplast PC31B . ltr	2.4		
Total wt. kgs	2292.1		



concrete mix designs



Arab Company العربية
For Laboratories and Soil المختبرات والتربة

ARAB COMPANY FOR LABORATORIES & SOIL
Compressive Strength of Concrete Cylinder

Owner	N.P	Report No.	BH.MMC25006155 @ 7
Consultant	N.P		
Contractor	Ramah Alqassim Factory for Blocks and Ready-Mix Concrete	Moisture Condition	Saturated
Project Name	Private	Dimensions	Checked
Project Location	Qassim	Curing Condition	Standard Cured
Curing Temp.	23±2	Nominal Size	150*300 mm
Test Method	ASTM C39-23	Volume Determination	By Calculation
Condition of Sample	Good	Tested By	Zeshan.RY -1621
Place of Sample/Cast	Site	Sample Brought in By	Jaber RY 1142
Sampling Method	ASTM C31-23	Source	Ramah Alqassim RMC
Sampled By	Jaber RY 1142	Date Reported	10/05/2025
Structure Reference	Trial Mix	Date Of Sampling/ Time	03/05/2025
No. of Cylinders	3	Grade of Concrete	C - 15 MPa (OPC)
Castling Date	03/05/2025	Method of Compaction	MANUAL
		Equip. Of Compaction	COMPACTING ROD

Cyl. No.	Date		Test Age (Days)	Dimensions		Sample Weight (gm)	Density (g/cm³)	Load (KN)	Compressive Strength				Type of Fracture
	Cast	Tested		D=	L=				(N/mm²)		(Kg/Cm²)		
									Cal.	Group Avg.	Cal.	Group Avg.	
1	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12218	2.305	325.8	18.4		188.1		Satisfactory -Type 2	
3	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12224	2.306	328.0	18.6	18.8	189.3	191.5	Satisfactory -Type 2	
5	3/5/2025	10/5/2025	7	D= 15.00 L= 30.00	12247	2.310	341.7	19.3		197.2		Satisfactory -Type 2	

Remarks:	<p>Specified Strength: 15 MPa (OPC). Note 1 - Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES.</p> <p>2- The laboratory responsible for all the information provided in the report.</p> <p>3- Decision rule is simple acceptance criteria.</p>
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شركة ذات مسؤولية محدودة رأس المال ٥.٦٦٢.٥٠٠.٠٠٠

concrete mix designs

Owner	N.P	Report No.	BH.MMC25004155 @ 28
Consultant	N.P		
Contractor	Ramah Alqassim Factory for Blocks and Ready-Mix Concrete	Moisture Condition	Saturated
Project Name	Private	Dimensions	Checked
Project Location	Qassim	Curing Condition	Standard Cured
		Nominal Size	150*300 mm
Curing Temp.	23±2	Volume Determination	By Calculation
Test Method	ASTM C39-23	Tested By	Zeshan,RY - 1621
Condition of Sample	Good	Sample Brought in By	Jaber RY 1142
Place of Sample/Cast	Site	Source	Ramah Alqassim RMC
Sampling Method	ASTM C31-23	Date Reported	31/05/2025
Sampled By	Jaber RY 1142	Date Of Sampling/ Time	03/05/2025
Structure Reference	Trial Mix	Grade of Concrete	C - 15 MPa (OPC)
No. of Cylinders	3	Method of Compaction	MANUAL
Casting Date	03/05/2025	Equip. Of Compaction	COMPACTING ROD

Cyl. No.	Date		Test Age (Days)	Dimensions	Sample Weight (gm)	Density (g/cm ³)	Load (KN)	Compressive Strength				Type of Fracture
	Cast	Tested						(N/mm ²)		(Kg/Cm ²)		
								Cal.	Group Avg.	Cal.	Group Avg.	
2	3/5/2025	31/5/2025	28	D= 15.00 L= 30.00	12365	2.332	423.5	24.0		244.4		Satisfactory -Type 2
4	3/5/2025	31/5/2025	28	D= 15.00 L= 30.00	12384	2.336	414.6	23.5	23.8	239.3	242.6	Satisfactory -Type 2
6	3/5/2025	31/5/2025	28	D= 15.00 L= 30.00	12401	2.339	422.8	23.9		244.0		Satisfactory -Type 2

Remarks:	Specified Strength: 15 MPa (OPC). Note 1- Test results shall not be interpreted, reproduced or quoted in a whole or in part without prior written approval of ACES. 2- The laboratory responsible for all the information provided in the report. 3- Decision rule is simple acceptance criteria.
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