

Materials Testing Laboratory

34 Engineer Construction Brigade

34 Engineer Construction Brigade, Dampara, Chattogram-4000, Bangladesh

TEST REPORT

Test No & Date : MTL/2023/5498
Ref. No : 23.01.924.224.06.193.09.09.01.23.920
Supplier : Office of the Project Director, Khurushkul Special Ashrayan Project, Cox's Bazar.
Contractor : M/S Ahad Builders & Sam Trading (JV), M/S Iqbal Builders, M/s Ahad Builders- (JV) & M/S Ahad Builders hqe
Name of the Test : Diameter, Unit weight, Yield Strength, Tensile Strength, Elongation Test of Rebar (Brand: SSRM 420DWR)
Location : 5 Floor Building, Khurushkul Special Ashrayan Project
Sample : Sealed Condition

Date: 11 January 2023

Date: 09 January 2023

Date: 10 January 2023

Nominal Dia	Actual Dia (mm)	Avg. Actual Dia (mm)	Unit Weight (Kg/m)	Avg. Unit Weight (Kg/m)	Yield Strength (MPa)	Avg. Yield Strength (MPa)	Ult. Strength (MPa)	Avg. Ult. Strength (MPa)	US/YS	Elongation (%)	Avg. Elongation (%)
16	15.86	15.84	1.55	1.55	456.03	465.30	669.35	674.76	1.45	12.62	12.91
	15.86		1.55		491.58		695.11			13.15	
	15.80		1.54		448.30		659.81			12.95	

Explanatory Notes: 1MPa = 145.038 psi

ASTM A615-16 Weight Requirements & Nominal Area of Bars

Nominal Dia, mm	10	12	16	20	22	25	28	32	36	40	50	60
Nominal Area, sq. mm	79	113	201	314	380	491	616	804	1018	1257	1963	2827
Nominal Weight, kg/m	0.617	0.888	1.578	2.466	2.984	3.853	4.834	6.313	7.990	9.865	15.41	22.2

ASTM A 615 M-16 Tensile Requirements for Common Steel Grades

	Grade 60 (420)	Grade 75 (520)	Grade 80 (550)
Tensile Strength min. MPa (psi)	620 (90000)	690 (100000)	725 (105000)
Yield Strength min. MPa (psi)	420 (60000)	520 (75000)	550 (80000)
Elongation in 200 mm (8 in), min%			
Bar No.	10, 12, 16, 20	9	7
	25, 22	8	7
	28, 32, 36, 40, 50, 60	7	6

1. Measured unit weight shall not be less than 94% of the nominal weight.

2. Area & weight of 22mm dia bar is derived based on principle followed for other sizes in Table A1.1

3. Actual dia & US/YS ratio are provided for information purpose only.

These are not requirements of ASTM A615M-16

Test Conducted by

Countersigned by

Alamin
11.01.2023

MD AL AMIN ISLAM
Laboratory Assistant

Rokibul Islam
12/01/23

MAJOR MD ROKIBUL ISLAM
Director
Materials Testing Laboratory



Materials Testing Laboratory

34 Engineer Construction Brigade

34 Engineer Construction Brigade, Dampara, Chattogram-4000, Bangladesh

TEST REPORT

Test No & Date : MTL/2023/5499 Date: 11 January 2023
Ref. No : 23.01.924.224.06.193.09.09.01.23.920 Date: 09 January 2023
Supplier : Office of the Project Director, Khurushkul Special Ashrayan Project, Cox's Bazar.
Contractor : M/S Ahad Builders & Sam Trading (JV), M/S Iqbal Builders, M/s Ahad Builders- (JV) & M/S Ahad Builders hqe
Name of the Test : Diameter, Unit weight, Yield Strength, Tensile Strength, Elongation Test of Rebar (Brand: SSRM 420DWR)
Location : 5 Floor Building, Khurushkul Special Ashrayan Project
Sample : Sealed Condition

Date: 10 January 2023

Nominal Dia	Actual Dia (mm)	Avg. Actual Dia (mm)	Unit Weight (Kg/m)	Avg. Unit Weight (Kg/m)	Yield Strength (MPa)	Avg. Yield Strength (MPa)	Ult. Strength (MPa)	Avg. Ult. Strength (MPa)	US/YS	Elongation (%)	Avg. Elongation (%)
16	15.80	15.80	1.54	1.54	469.94	460.86	670.05	659.40	1.43	13.02	13.17
	15.80		1.54		452.96		652.06			13.92	
	15.80		1.54		459.67		656.10			12.57	

Explanatory Notes: 1MPa = 145.038 psi

ASTM A615-16 Weight Requirements & Nominal Area of Bars

Nominal Dia, mm	10	12	16	20	22	25	28	32	36	40	50	60
Nominal Area, sq. mm	79	113	201	314	380	491	616	804	1018	1257	1963	2827
Nominal Weight, kg/m	0.617	0.888	1.578	2.466	2.984	3.853	4.834	6.313	7.990	9.865	15.41	22.2

ASTM A 615 M-16 Tensile Requirements for Common Steel Grades

ASTM A 615 M-16 Tensile Requirements for Common Steel Grades				
		Grade 60 (420)	Grade 75 (520)	Grade 80 (550)
Tensile Strength min. MPa (psi)		620 (90000)	690 (100000)	725 (105000)
Yield Strength min. MPa (psi)		420 (60000)	520 (75000)	550 (80000)
Elongation in 200 mm (8 in), min%				
Bar No.	10, 12, 16, 20	9	7	7
	25, 22	8	7	7
	28, 32, 36, 40, 50, 60	7	6	6

1. Measured unit weight shall not be less than 94% of the nominal weight.

2. Area & weight of 22mm dia bar is derived based on principle followed for other sizes in Table A1.1

3. Actual dia & US/YS ratio are provided for information purpose only.

These are not requirements of ASTM A615M-16

Test Conducted by

Countersigned by

Alamin
11.01.2023

MD AL AMIN ISLAM
Laboratory Assistant

Major MD Rokibul Islam
11/23

MAJOR MD ROKIBUL ISLAM
Director
Materials Testing Laboratory



Materials Testing Laboratory

34 Engineer Construction Brigade

34 Engineer Construction Brigade, Dampara, Chattogram-4000, Bangladesh

TEST REPORT

Test No & Date : MTL/2023/5500 Date: 11 January 2023
Ref. No : 23.01.924.224.06.193.09.09.01.23.920 Date: 09 January 2023
Supplier : Office of the Project Director, Khurushkul Special Ashrayan Project, Cox's Bazar.
Contractor : M/S Ahad Builders & Sam Trading (JV), M/S Iqbal Builders, M/s Ahad Builders- (JV) & M/S Ahad Builders hqe
Name of the Test : Diameter, Unit weight, Yield Strength, Tensile Strength, Elongation Test of Rebar (Brand: SSRM 420DWR)
Location : 5 Floor Building, Khurushkul Special Ashrayan Project
Sample : Sealed Condition Date: 10 January 2023

Nominal Dia	Actual Dia (mm)	Avg. Actual Dia (mm)	Unit Weight (Kg/m)	Avg. Unit Weight (Kg/m)	Yield Strength (MPa)	Avg. Yield Strength (MPa)	Ult. Strength (MPa)	Avg. Ult. Strength (MPa)	US/YS	Elongation (%)	Avg. Elongation (%)
16	15.75	15.80	1.53	1.54	456.10	461.70	653.86	659.44	1.43	11.55	13.02
	15.86		1.55		476.43		676.64			14.05	
	15.80		1.54		452.57		647.81			13.45	

Explanatory Notes: 1MPa = 145.038 psi

ASTM A615-16 Weight Requirements & Nominal Area of Bars

Nominal Dia, mm	10	12	16	20	22	25	28	32	36	40	50	60
Nominal Area, sq. mm	79	113	201	314	380	491	616	804	1018	1257	1963	2827
Nominal Weight, kg/m	0.617	0.888	1.578	2.466	2.984	3.853	4.834	6.313	7.990	9.865	15.41	22.2

ASTM A 615 M-16 Tensile Requirements for Common Steel Grades

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Bar No.	10, 12, 16, 20	9	7	7
	25, 22	8	7	7
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3. Actual dia & US/YS ratio are provided for information purpose only. These are not requirements of ASTM A615M-16

Test Conducted by

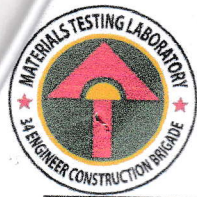
Countersigned by

Alamin
11.01.2023

MD AL AMIN ISLAM
Laboratory Assistant

Rokibul
12/01/23

MAJOR MD ROKIBUL ISLAM
Director
Materials Testing Laboratory



Materials Testing Laboratory

34 Engineer Construction Brigade

34 Engineer Construction Brigade, Dampara, Chattogram-4000, Bangladesh

TEST REPORT

Test No & Date : MTL/2023/5501
Ref. No : 23.01.924.224.06.193.09.09.01.23.920
Supplier : Office of the Project Director, Khurushkul Special Ashrayan Project, Cox's Bazar.
Contractor : M/S Ahad Builders & Sam Trading (JV), M/S Iqbal Builders, M/s Ahad Builders- (JV) & M/S Ahad Builders hqe
Name of the Test : Diameter, Unit weight, Yield Strength, Tensile Strength, Elongation Test of Rebar (Brand: SSRM 420DWR)
Location : 5 Floor Building, Khurushkul Special Ashrayan Project
Sample : Sealed Condition

Date: 11 January 2023

Date: 09 January 2023

Date: 10 January 2023

Nominal Dia	Actual Dia (mm)	Avg. Actual Dia (mm)	Unit Weight (Kg/m)	Avg. Unit Weight (Kg/m)	Yield Strength (MPa)	Avg. Yield Strength (MPa)	Ult. Strength (MPa)	Avg. Ult. Strength (MPa)	US/YS	Elongation (%)	Avg. Elongation (%)
20	19.93	19.93	2.45	2.45	431.11	423.06	621.43	614.15	1.45	15.45	16.30
	19.93		2.45		417.12		611.18			17.55	
	19.93		2.45		420.94		609.84			15.90	

Explanatory Notes: 1MPa = 145.038 psi

ASTM A615-16 Weight Requirements & Nominal Area of Bars

Nominal Dia, mm	10	12	16	20	22	25	28	32	36	40	50	60
Nominal Area, sq. mm	79	113	201	314	380	491	616	804	1018	1257	1963	2827
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ASTM A 615 M-16 Tensile Requirements for Common Steel Grades

	Grade 60 (420)	Grade 75 (520)	Grade 80 (550)
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Bar No.	10, 12, 16, 20	9	7
	25, 22	8	7
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1. Measured unit weight shall not be less than 94% of the nominal weight.

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3. Actual dia & US/YS ratio are provided for information purpose only.

These are not requirements of ASTM A615M-16

Test Conducted by

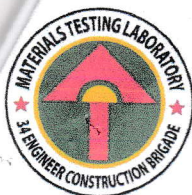
Countersigned by

Alamin
11.01.2023

MD AL AMIN ISLAM
Laboratory Assistant

Rokibul Islam
12/01/23

MAJOR MD ROKIBUL ISLAM
Director
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Materials Testing Laboratory

34 Engineer Construction Brigade

34 Engineer Construction Brigade, Dampara, Chattogram-4000, Bangladesh

TEST REPORT

Test No & Date : MTL/2023/5502
Ref. No : 23.01.924.224.06.193.09.09.01.23.920
Supplier : Office of the Project Director, Khurushkul Special Ashrayan Project, Cox's Bazar.
Contractor : M/S Ahad Builders & Sam Trading (JV), M/S Iqbal Builders, M/s Ahad Builders- (JV) & M/S Ahad Builders hq
Name of the Test : Diameter, Unit weight, Yield Strength, Tensile Strength, Elongation Test of Rebar (Brand: SSRM 420DWR)
Location : 5 Floor Building, Khurushkul Special Ashrayan Project
Sample : Sealed Condition

Date: 11 January 2023

Date: 09 January 2023

Date: 10 January 2023

Nominal Dia	Actual Dia (mm)	Avg. Actual Dia (mm)	Unit Weight (Kg/m)	Avg. Unit Weight (Kg/m)	Yield Strength (MPa)	Avg. Yield Strength (MPa)	Ult. Strength (MPa)	Avg. Ult. Strength (MPa)	US/YS	Elongation (%)	Avg. Elongation (%)
20	20.02	19.98	2.47	2.46	422.38	422.73	617.70	616.19	1.46	16.60	16.02
	19.98		2.46		416.52		610.62			16.05	
	19.93		2.45		429.28		620.25			15.40	

Explanatory Notes: 1MPa = 145.038 psi

ASTM A615-16 Weight Requirements & Nominal Area of Bars

Nominal Dia, mm	10	12	16	20	22	25	28	32	36	40	50	60
Nominal Area, sq. mm	79	113	201	314	380	491	616	804	1018	1257	1963	2827
Nominal Weight, kg/m	0.617	0.888	1.578	2.466	2.984	3.853	4.834	6.313	7.990	9.865	15.41	22.2

ASTM A 615 M-16 Tensile Requirements for Common Steel Grades

	Grade 60 (420)	Grade 75 (520)	Grade 80 (550)
Tensile Strength min. MPa (psi)	620 (90000)	690 (100000)	725 (105000)
Yield Strength min. MPa (psi)	420 (60000)	520 (75000)	550 (80000)
Elongation in 200 mm (8 in), min%			
Bar No.	10, 12, 16, 20	9	7
	25, 22	8	7
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1. Measured unit weight shall not be less than 94% of the nominal weight.

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3. Actual dia & US/YS ratio are provided for information purpose only.

These are not requirements of ASTM A615M-16

Test Conducted by

Countersigned by

Alamin
11.01.2023

MD AL AMIN ISLAM
Laboratory Assistant

Rokibul 12/01/23

MAJOR MD ROKIBUL ISLAM
Director

Materials Testing Laboratory



Materials Testing Laboratory

34 Engineer Construction Brigade

34 Engineer Construction Brigade, Dampara, Chattogram-4000, Bangladesh

TEST REPORT

Test No & Date : MTL/2023/5503
Ref. No : 23.01.924.224.06.193.09.09.01.23.920
Supplier : Office of the Project Director, Khurushkul Special Ashrayan Project, Cox's Bazar.
Contractor : M/S Ahad Builders & Sam Trading (JV), M/S Iqbal Builders, M/s Ahad Builders- (JV) & M/S Ahad Builders hqe
Name of the Test : Diameter, Unit weight, Yield Strength, Tensile Strength, Elongation Test of Rebar (Brand: SSRM 420DWR)
Location : 5 Floor Building, Khurushkul Special Ashrayan Project
Sample : Sealed Condition

Date: 11 January 2023

Date: 09 January 2023

Date: 10 January 2023

Nominal Dia	Actual Dia (mm)	Avg. Actual Dia (mm)	Unit Weight (Kg/m)	Avg. Unit Weight (Kg/m)	Yield Strength (MPa)	Avg. Yield Strength (MPa)	Ult. Strength (MPa)	Avg. Ult. Strength (MPa)	US/YS	Elongation (%)	Avg. Elongation (%)
20	20.02	19.96	2.47	2.46	448.44	437.95	632.98	623.88	1.42	14.96	16.25
	19.93		2.45		434.79		619.72			16.81	
	19.93		2.45		430.63		618.93			16.97	

Explanatory Notes: 1MPa = 145.038 psi

ASTM A615-16 Weight Requirements & Nominal Area of Bars

Nominal Dia, mm	10	12	16	20	22	25	28	32	36	40	50	60
Nominal Area, sq. mm	79	113	201	314	380	491	616	804	1018	1257	1963	2827
Nominal Weight, kg/m	0.617	0.888	1.578	2.466	2.984	3.853	4.834	6.313	7.990	9.865	15.41	22.2

ASTM A 615 M-16 Tensile Requirements for Common Steel Grades

	Grade 60 (420)	Grade 75 (520)	Grade 80 (550)
Tensile Strength min. MPa (psi)	620 (90000)	690 (100000)	725 (105000)
Yield Strength min. MPa (psi)	420 (60000)	520 (75000)	550 (80000)
Elongation in 200 mm (8 in), min%			
Bar No.	10, 12, 16, 20	9	7
	25, 22	8	7
	28, 32, 36, 40, 50, 60	7	6

1. Measured unit weight shall not be less than 94% of the nominal weight.

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3. Actual dia & US/YS ratio are provided for information purpose only.

These are not requirements of ASTM A615M-16

Test Conducted by

Countersigned by

Alamin
01.01.2023

MD AL AMIN ISLAM
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Rokibul
12/01/23

MAJOR MD ROKIBUL ISLAM
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