

Test Performed by: .S. Asad Ali Gillani

Muhammad Riaz\  
Resident Engineer  
ACES Site Office  
RGC DHA Multan

Client Reference No.: ACES-DHAM-GCRR-391

Dated: 23-08-2021

SOM Lab Ref: CED/SOM/4876 (Page 1/1)

Dated: 27-08-2021

Test Type: Tensile Test

Sample Type: Nut - Bolts (16mm, )

Test Specification: ASTM – F-606

#### Tensile Test Results

Sample No.	Sample Type	Tested Diameter of Bolt (mm)	Ultimate Load (kN)	Ultimate Tensile Stress (MPa)	% Elongation
1	Nut- Bolt - (16mm)	10.0	46.5	592.0	40

Note: Please always confirm the results on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

M/S CMPAK Limited.

**Test Performed By:** Dr. /Engr. S. Asad Ali Gillani

Project: CMPAK new Data Center Quaid-e-Azam Industrial Estate (KLP), Lahore

**Client Reference:** CMPAK/NDC/Steel/16

**Dated:** 26-08-2021

**SOM Lab Ref:** CED/SOM/4879 (Page-2/2)

**Dated:** 27-08-2021

**Test:** Tension Test & Bend Test

**Test Specification:** ASTM-A-615

**Sample Type:** Deformed Bar

**Gauge Length:** 200 mm

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	kg/m	mm	mm	mm <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	1.488	16	15.55	201	190	82.50	116.00	410	435	577	611	32.5	200	16.3	
2	1.466	16	15.42	201	187	81.50	116.20	405	437	578	623	35.0	200	17.5	
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**BEND TEST:**

16mm	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Three Samples Received and Tested

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

M/S CMPAK Limited.

**Test Performed By:** Dr. /Engr. S. Asad Ali Gillani

Project: CMPAK new Data Center Quaid-e-Azam Industrial Estate (KLP), Lahore

**Client Reference:** CMPAK/NDC/Steel/20

**Dated:** 26-08-2021

**SOM Lab Ref:** CED/SOM/4879 (Page-1/2)

**Dated:** 27-08-2021

**Test:** Tension Test & Bend Test

**Test Specification:** ASTM-A-615

**Sample Type:** Deformed Bar

**Gauge Length:** 200 mm

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	kg/m	mm	mm	mm <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	2.120	20	18.54	314	270	123.50	166.00	393	458	528	615	35.0	200	17.5	
2	2.120	20	18.54	314	270	123.00	166.20	392	456	529	616	32.5	200	16.3	
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**BEND TEST:**

20mm	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Three Samples Received and Tested

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

M/S CMPAK Limited.

**Test Performed By:** Dr. /Engr. S. Asad Ali Gillani

Project: Platform Foundations CMPAK Quaid-e0Azam Industrial Estate (KLP), Lahore

**Client Reference:** CMPAK/SPF/Steel/12

**Dated:** 26-08-2021

**SOM Lab Ref:** CED/SOM/4879 (Page-1/1)

**Dated:** 27-08-2021

**Test:** Tension Test & Bend Test

**Test Specification:** ASTM-A-615

**Sample Type:** Deformed Bar

**Gauge Length:** 200 mm

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	kg/m	mm	mm	mm <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	0.998	12	12.72	113	127	59.00	88.00	522	465	778	693	32.5	200	16.3	
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**BEND TEST:**

12mm	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Two Samples Received and Tested

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Khalid Bashir  
Ittefaq Building Solution (Pvt) Ltd. Lahore

Test Performed By: Dr. /Engr. S. Asad Ali Gillani

Client Reference: IBS/sd/st-01

Dated: 27-08-2021

SOM Lab Ref: CED/SOM/4880 (Page-1/1)

Dated: 27-08-2021

Test: Tension Test Bend Test

Test Specification: ASTM-F-1554

Sample Type: M S Deformed Bar

Gauge Length: 200 mm

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	kg/m	mm	mm	mm <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	3.810	25	24.85	491	485	218.20	298.50	445	450	608	616	37.5	200	18.8	
2	3.839	25	24.95	491	489	220.50	300.50	449	451	612	615	40.0	200	20.0	
3	2.235	16	19.04	201	285	132.00	172.50	657	464	858	606	37.5	200	18.8	
4	2.251	16	19.11	201	287	130.50	171.50	649	456	853	599	35.0	200	17.5	
5	0.988	12	12.66	113	126	51.50	70.00	455	410	619	557	35.0	200	17.5	
6	0.996	12	12.71	113	127	53.50	71.50	473	422	632	564	30.0	200	15.0	
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**BEND TEST:**

25MM	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Nine Samples Received and Tested
16MM	Sample bend through 180 degrees Satisfactorily without any crack	
12MM	Sample bend through 180 degrees Satisfactorily without any crack	

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Haji Iqbal  
Sheikhupura Road,

**Test Performed By:** Dr. /Engr. S. Asad Ali Gillani

**Client Reference:** nil

**SOM Lab Ref:** 4875(Page-1/1)

**Dated:** 27-08-2021

**Dated:** 27-08-2021

**Test:** Tension Test

**Test Specification:** ASTM-A-615

**Gauge Length:** 8 inch

**Sample Type:** Deformed Bar

ASTM-A-615

Deformed Bar

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.586	8	0.984	0.79	0.760	23.82	30.99	66510	69130	86510	89930	1.50	8.0	18.8	
2	1.467	6	0.741	0.44	0.431	12.64	16.62	63360	64680	83290	85030	1.30	8.0	16.3	
3	0.649	4	0.493	0.20	0.191	5.40	7.24	59580	62390	79810	83570	1.30	8.0	16.3	
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**BEND TEST:**

--	No Bend test performed	<b>Note:-</b>  Only Three Samples Received and Tested

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Khalid Bashir

Test Performed By:

Dr. /Engr. S. Asas Ali Gillani

Ittefaq Building Solution (Pvt) Ltd. Lahore (Project Name: ATS-02 )

Client Reference: IBS/SD/ST-01

SOM Lab Ref: 4880 (Page-1/1)

Dated: 27-08-2021

Dated: 27-08-2021

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.645	8	0.995	0.79	0.777	25.08	35.47	70010	71180	99030	100690	1.30	8.0	16.3	
2	1.055	5	0.628	0.31	0.310	9.68	13.17	68900	68900	93700	93700	1.30	8.0	16.3	
3	0.658	4	0.496	0.20	0.193	6.03	8.28	66550	68960	91280	94590	1.50	8.0	18.8	
4	0.648	4	0.492	0.20	0.190	5.68	8.12	62610	65910	89590	94310	1.30	8.0	16.3	
5	0.661	4	0.497	0.20	0.194	7.21	9.45	79470	81930	104200	107430	1.20	8.0	15.0	
6	0.665	4	0.498	0.20	0.195	7.34	9.84	80940	83010	108480	111260	1.00	8.0	12.5	
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**BEND TEST:**

# 8	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Nine Samples Received and Tested
# 5	Sample bend through 180 degrees Satisfactorily without any crack	
# 4	Sample bend through 180 degrees Satisfactorily without any crack	

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)