

Muhammad Adnan  
Senior Site Engineer, PA-Chem Global (Pvt) Ltd.

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

**Client Reference:** 300/PGL/14102019/02

**Dated:** 9-11-2019

**SOM Lab Ref:** CED/SOM/1717(Page-1/1)

**Dated:** 11-11-2019

**Test:** Tension and Bend Test

**Test Specification:** ASTM-A 615

**Sample Type:** Deformed Steel 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	1.013	12	12.82	113	129	58.70	87.20	519	456	771	676	32.5	200	16.3	
2	1.017	12	12.85	113	130	58.50	87.20	517	452	771	673	40.0	200	20.0	
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**BEND TEST:**

12mm	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)

Sub Divisional Officer  
Highway Sub Division, Sahiwal

Test Performed By: Dr. /Engr.

S. Asad Ali  
Gillani

Client Reference: 165/SDO

Dated: 04-11-2019

SOM Lab

Ref: 1715 (Page-1/1)

Dated: 11-11-2019

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

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	3.511	9	1.146	1.00	1.032	30.78	50.28	67900	65790	110880	107440	1.30	8.0	16.3	
2	3.497	9	1.144	1.00	1.028	31.09	50.48	68570	66700	111330	108300	1.40	8.0	17.5	
3	2.685	8	1.002	0.79	0.789	22.12	35.93	61760	61830	100320	100440	1.70	8.0	21.3	
4	2.681	8	1.002	0.79	0.788	22.12	35.80	61760	61910	99950	100200	1.60	8.0	20.0	
5	1.572	6	0.767	0.44	0.462	13.51	20.95	67700	64480	105000	100000	1.30	8.0	16.3	
6	1.568	6	0.766	0.44	0.461	13.58	21.00	68060	64960	105260	100460	1.50	8.0	18.8	
7	0.666	4	0.500	0.20	0.196	5.78	8.74	63740	65040	96340	98300	1.20	8.0	15.0	
8	0.665	4	0.498	0.20	0.195	5.86	8.79	64640	66290	96900	99380	1.10	8.0	13.8	
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**BEND TEST:**

# 9	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Twelve Samples Received and Tested
# 8	Sample bend through 180 degrees Satisfactorily without any crack	
# 6	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)

Malik Zafar  
 GE, general Manager, Nishat Bhakhi, Sheikhpura

**Test Performed By:** Dr. /Engr. Nauman Khurram

**Client Reference:** Nil

**SOM Lab**

**Ref:** 1718(Page-1/1)

**Dated:** 06-11-2019

**Dated:** 11-11-2019

**Test:** Tension Test & Bend 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	1.614	6	0.777	0.44	0.474	15.49	21.36	77670	72100	107040	99370	1.30	8.0	16.3	
2	1.619	6	0.778	0.44	0.476	15.72	21.25	78790	72830	106530	98480	1.40	8.0	17.5	
3	1.071	5	0.633	0.31	0.315	9.50	12.66	67590	66520	90070	88640	1.40	8.0	17.5	
4	1.027	5	0.620	0.31	0.302	9.19	12.08	65420	67150	85940	88220	1.30	8.0	16.3	
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**BEND TEST:**

# 6	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Six Samples Received and Tested
# 5	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)