

Qamar uz Zaman
Project Manager, Aujla & AssociatesGujranwala

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

Client Reference: nil
Dated: 01-06-2020

SOM Lab Ref: 2521(Page-1/1)
Dated: 01-06-2020

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Deformed

Gauge Length: 8 inch

Sample Type: Bar

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 ²	in ²	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.574	8	0.981	0.79	0.756	24.06	31.98	67160	70180	89270	93290	1.00	8.0	12.5	
2	2.590	8	0.984	0.79	0.761	24.08	32.28	67220	69780	90130	93560	1.20	8.0	15.0	
3	1.528	6	0.756	0.44	0.449	15.14	19.95	75880	74360	99990	97990	1.00	8.0	12.5	
4	1.511	6	0.752	0.44	0.444	17.33	21.58	86860	86080	108170	107190	1.00	8.0	12.5	
5	0.655	4	0.494	0.20	0.192	6.78	8.66	74750	77870	95550	99530	1.00	8.0	12.5	
6	0.658	4	0.496	0.20	0.193	6.44	8.46	71040	73620	93300	96680	1.00	8.0	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Nine Samples Received and Tested
# 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

Qamar uz Zaman
Project Manager, Aujla & Associates Gujranwala

Test Performed By: Dr. /Engr.

S. Asas Ali
Gillani

Client Reference: nil

Dated: 01-06-2020

Test: Tension Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 2521(Page-1/1)

Dated: 01-06-2020

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 ²	in ²	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.574	8	0.981	0.79	0.756	24.06	31.98	67160	70180	89270	93290	1.00	8.0	12.5	
2	2.590	8	0.984	0.79	0.761	24.08	32.28	67220	69780	90130	93560	1.20	8.0	15.0	
3	1.528	6	0.756	0.44	0.449	15.14	19.95	75880	74360	99990	97990	1.00	8.0	12.5	
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6	0.658	4	0.496	0.20	0.193	6.44	8.46	71040	73620	93300	96680	1.00	8.0	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

BEND TEST:

--	No Bend test performed	Note:- Only Nine Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Test Performed By: Dr. Asad Ali Gillani

M. Ubaid Ullah Khalid
Manager Marketing,
Fiber Craft Industries
Lahore

Client Reference: FCI/20/CR/17691

Dated: 01-06-2020

SOM Laboratory Reference: CED/SOM/2519(Page-1/1)

Dated: 01-06-2020

Test: Stiffness Test & Tensile Test,

Sample Type: GRP Pipe (1000mm Diameter)

Stiffness Test (Parallel Plate Loading Test as per ASTM-D-2412)

(GRP Pipe 1000mm)

Total Length = 305 mm, External Diameter = 1028 mm, Wall Thickness = 14.0 mm

Percentage Reduction in Diameter of Sample	Compression Load, P (kN)	Stiffness (Corrected)			Remarks
		Pipe Stiffness (kN/m ²)	Stiffness Factor (N-m)	Specific Tangential initial Stiffness (N/m ²)	
5%	4.4 <u>--4</u>	306	5948	5948	No Crack Observed

Tensile Test

Sample Type	Size of Sample (mm)	Ultimate Load (kN)	Ultimate Stress (MPa)
GRP Pipe (1000mm)	21.0 x 14.0	7.6	25.803