

Major Tanveer Ahmad ®

Test Performed By:

Dr. /Engr.

Asad Ali Gillani

RE-2 ACES,DHA Multan.(Ref: M/S UJC-SAACO JV Latter no.UJC/SAACO/DHA-M/2022/1114)

Client Reference: ACES/DHA/DEV/SEC-V/902

Dated: 25-06-2022

SOM Lab Ref: CED/SOM/650(Page-1/1)

Dated: 21-07-2022

Test: Tension Test & Bend Test

Test Specification: ASTM-A 615

Sample Type: Deformed Bar (HSJ Steel)

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 ²	mm ²	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	1.000	12	12.72	113	127	65.70	85.70	581	518	758	675	30.0	200	15.0	
2	1.005	12	12.77	113	128	66.00	87.20	584	516	771	682	27.5	200	13.8	
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BEND TEST:

12mm	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Three Samples Received and Tested

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

Sub Divisional Officer

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

BSD Pakpattan.(Estb Of Govt; Associate College For Boys,93/D Noor Pur Pakpattan)

Client Reference: 153-A/SDO-PPN

SOM Lab

Ref: 651 (Page-1/1)

Dated: 22-06-2022

Dated: 21-07-2022

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 ²	in ²	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.668	8	0.999	0.79	0.784	26.63	34.78	74330	74900	97100	97840	1.30	8.0	16.3	
2	1.499	6	0.749	0.44	0.441	14.70	18.65	73680	73510	93510	93290	1.40	8.0	17.5	
3	0.661	4	0.497	0.20	0.194	6.65	8.46	73290	75560	93300	96190	1.10	8.0	13.8	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Six 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

Sub Divisional Officer, BSD

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

Mandi Bahauddin. (Prov. Of Infra. Academic & Operational Facilities To The Punjab Uni Of Tech Rasul)

Client Reference: 175/MB

SOM Lab

Ref: 652 (Page-1/1)

Dated: 06-04-2022

Dated: 21-07-2022

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 ²	in ²	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.379	6	0.718	0.44	0.405	12.03	18.88	60290	65500	94630	102810	1.00	8.0	12.5	
2	0.587	4	0.469	0.20	0.173	4.08	5.88	44970	51980	64860	74980	1.30	8.0	16.3	
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BEND TEST:

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

Test Performed by: Dr. S. Asad Ali Gillani

Sami Ullah Khan
Resident Engineer Nespak, Bannu.

Project: Construction of Circular Bypass Road Bannu ADP No.1607/170523 (2021-2023) Package-VII (10
No. Bridge Within Km 0+000 To 30+000)
(Polymet Industries LLC-Rak (WoSd 50) Bridge Expansion Joint)

Reference No.: 4040/021/SK/02/0393
SOM Lab Ref: CED/SOM/649(Page-1/3)

Dated: 20-07-2022
Dated: 21-07-2022

Test: Tensile Test, Elongation at Break, Tear Test, Hardness Test & Comp. Set Test

Sample Type: Elastomer (Expansion Joint)

TENSILE STRENGTH AND ELONGATION TEST. (AS PER ASTM-D-412)

S. No	Sample Size (mm)	Ultimate Load (kN)	Tensile Strength (Mpa)	Tensile Strength (kg/cm ²)	Elongation at Break(%)
1	6.9 x 3.2	0.45	20.38	207.81	520.0
2	6.9 x 3.1	0.46	21.50	219.29	500.0

TEAR STRENGTH (AS PER ASTM-D-624)

S. No	Sample Size (mm)	Ultimate Load (kN)	Tear Strength (N/mm)
1	10.0 x 3.6	0.25	69.44
2	10.0 x 4.0	0.25	62.50

- COMPRESSION SET TEST (AS PER ASTM-D-395)

S. No.	Thickness of Sample (mm)	Final Thickness (mm)	Compression set (%)
1	3.40	2.90	14.70

- HARDNESS TEST (AS PER ASTM-D-2240)

S. No	Sample Type	Hardness (Shore A)
1	Elastomeric Bearing Pad	63.00

Test Performed by: Dr. S. Asad Ali Gillani

Sami Ullah Khan
Resident Engineer Nespak.
Bannu.

Project: Construction of Circular Bypass Road Bannu ADP No.1607/170523 (2021-2023) Package-VII (10 No. Bridge Within Km 0+000 To 30+000)
(Polymet Industries LLC-Rak (WoSd 50) Bridge Expansion Joint)

Reference No.: 4040/021/SK/02/0393
CED/SOM/649(Page-2/3)
Test: Hardness Test (Aluminum)

Dated: 20-07-2022 **SOM Lab Ref:**
Dated: 21-07-2022

Sample Type: Aluminum (Expansion Joint)

Hardness Test Details:

Machine used: Avery Rockwell Hardness Testing Machine

(Minor Load: 10 Kgf Major Load: 90.0 kgf Scale: B)

Hardness Test Results

Sample No.	Sample Type	Hardness
1	Aluminum (Expansion Joint)	HR – 70.26 – B

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

Test Performed by: Dr. S. Asad Ali Gillani

Sami Ullah Khan
Resident Engineer Nespak.
Bannu.

Project: Construction of Circular Bypass Road Bannu ADP No.1607/170523 (2021-2023) Package-VII (10 No. Bridge Within Km 0+000 To 30+000)
(Polymet Industries LLC-Rak (WoSd 50) Bridge Expansion Joint)

Reference No.: 4040/021/SK/02/0393

Dated: 20-07-2022 **SOM Lab Ref:**

CED/SOM/649(Page-3/3)

Dated: 21-07-2022

Test: Tension Test

Sample Type: Anchor Bolts (12mm)

Test Specification: ASTM-F-1554

Gauge Length: 2 Inches

Tension Test Results

Sr. No.	Original Diameter	Tested Diameter	Area	Ultimate Load	Ultimate stress	Elongation
	(mm)	(mm ²)	(mm ²)	KN	(Mpa)	%
1	12	7.90	49.01	50.2	1024.14	15.0
2	12	7.90	49.01	50.5	1030.40	15.0

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