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RECEIVING DATE: Dec 29, 2023
REPORT ISSUE DATE: Jan 02, 2024
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Applicant: Escorts Advanced Textile (Pvt.) Ltd.
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Sample submitted and identified as:

Manufacturer:	Escorts Advanced Textile (Pvt.) Ltd.
Brand:	/
Label:	/
Fabric Name:	Kevlar Neck Protector Black
Fabric Content:	/
Weight (Claimed):	/
Construction:	Rib
Style No:	Sample # 433
Color:	Black
Country of Origin:	Pakistan
Country of Destination:	/
Sample description:	Neck Protector
End use:	/
Testing period:	29 December 2023 – 02 January 2024

Signed on the behalf of:
Tti Testing Laboratories

Ali Ashraf
AVP Softlines

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Image of submitted sample



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Conclusion:

Sr. No	Test properties	Test Method	Performance Levels
1.	Abrasion Resistance	EN 388:2016+A1:2018 § 6.1	Level 2
2.	Tear resistance	EN 388:2016+A1:2018 § 6.4	Level 3
3.	Puncture Resistance	EN 388:2016+A1:2018 § 6.5	Level 3
4.	Cut resistance – TDM	ANSI/ISEA 105:2016 § 5.1.1	Level A3

Samples conditioning:

All test specimens are conditioned in controlled environment maintained at 23 ± 2 °C and $50\pm 5\%$ relative humidity for 24 hours.

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Test Results:

1. Abrasion Resistance:

EN 388:2016+A1:2018 § 6.1

	Unit	Outer Layer	2 nd Layer	Sum	Requirement
Specimen 1:	Rubs	350	300	650	/
Specimen 2:		300	300	600	
Specimen 3:		300	350	650	
Specimen 4:		350	300	650	
Minimum value:		600			
Performance Level:		2			

Test parameter	Performance levels			
	1	2	3	4
Abrasion resistance – (minimum number of rubs)	100	500	2000	8000

2. Tear Resistance:

EN 388:2016+A1:2018 § 6.4

Outer Material	Unit	Direction 1	Direction 2	Requirement
Specimen 1:	N	72*	60	/
Specimen 2:		88*	68	
Minimum value:		60		
Performance Level:		3		
Remarks: *Cross Tear				

Test parameter	Performance levels			
	1	2	3	4
Tear resistance (Minimum force N)	10	25	50	75

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3. Puncture Resistance:

EN 388:2016+A1:2018 § 6.5

Composite	Unit	Results	Requirement
Specimen 1:	N	119	/
Specimen 2:		130	
Specimen 3:		125	
Specimen 4:		120	
Minimum value:		119	
Performance Level:		3	

Test parameter	Performance levels			
	1	2	3	4
Puncture resistance (Minimum force – N)	20	60	100	150

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4. Cut Resistance – TDM:

ANSI/ISEA 105:2016 § 5.1.1

Test performed According to ASTM F2992-2015

Required cutting stroke length.	Rating force in Newton	Cutting stroke length in (mm)	Normalized cutting stroke length in (mm)
5 -20 mm	1530	09.60	08.60
	1530	10.50	09.50
	1530	11.00	09.90
	1530	09.00	08.10
	1530	10.00	09.00
20-33 mm	1326	23.00	20.70
	1326	24.50	22.10
	1326	25.00	22.50
	1326	20.00	18.00
	1326	18.60	16.70
33-50 mm	1122	49.90	44.90
	1122	45.00	40.50
	1122	48.00	43.20
	1122	41.30	37.20
	1122	48.60	43.70
20 mm	1326	23.00	20.70
	1326	24.50	22.10
	1326	25.00	22.50
	1326	20.00	18.00
	1326	18.60	16.70
Mean normalized cutting Stroke			20.00
Force required to cut through the material in a 20 mm			1326 grams
Cut length for neoprene at 500 gmf			22.2
Blade sharpness correction factor			0.9
Performance level			A3

Level of performance for materials tested with ASTM F2992-2015									
Test	Levels								
	A1	A2	A3	A4	A5	A6	A7	A8	A9
Blade Cut Resistance-TDM 100 (grams)	≥200	≥500	≥1000	≥1500	≥2200	≥3000	≥4000	≥5000	≥6000

----- END OF REPORT -----

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