

**TEST REPORT**

REPORT NUMBER: 21809-26
RECEIVING DATE: Jul 31, 2026
REPORT ISSUE DATE: Aug 03, 2026
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Applicant: Escorts Advanced Textile (Pvt.) Ltd.
Address: 1st Floor, PHMA House, 33-A, Block-D, Near Muslim Town, Canal Road, Lahore, Pakistan.
Contact person: Mr. Ghufuran Anwar
Contact details: Tel: /
Fax: /
Cell: +92 311 4990752
Email: lab@escortsadvanced.com

Sample submitted and identified as:

Manufacturer:	Escorts Advanced Textile (Pvt.) Ltd.
Label:	/
Fabric Name:	KEVLAR® ARM SLEEVE BLACK WITH LYCRA 18"-FO
Fiber Content (Claimed)	95% Kevlar 5% Lycra
ERP Code	2270010021
Weight:	130 G/PAIR
TRF:	1237
Color:	Black
Variants:	Yellow, Sage Green, Desert Tan
Prev. Report:	20310-26, 21091-26R
Country of Origin:	Pakistan
Country of Destination:	Pakistan
Sample description:	KEVLAR® ARM SLEEVE BLACK WITH LYCRA 18"-FO
End Use	Protective Clothing
Testing period:	31 July 2026 – 03 August 2026

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 Standard	Performance Levels
1.	Abrasion Resistance	EN 388:2016+A1:2018 § 6.1	Level 1
2.	Tear resistance	EN 388:2016+A1:2018 § 6.4	Level 4
3.	Puncture Resistance	EN 388:2016+A1:2018 § 6.5	Level 3
4.	Contact Heat	EN 407:2020 § 4.5.3	Level 1
5.	Cut Resistance – TDM	ANSI/ISEA 105:2024 § 6.1.1	Level A3
6.	Fiber Composition	ISO 1833	See Result

Samples conditioning:

The test specimens are conditioned in controlled environment maintained at $23\pm 2^{\circ}\text{C}$ 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

Pre-Treatment: Original State

Material: Outer Layer + Lining

	Unit	1 st Layer	2 nd Layer	Sum	Requirement
Specimen 1:	Rubs	>100-<500	>100-<500	>100-<500	/
Specimen 2:		>100-<500	>100-<500	>100-<500	
Specimen 3:		>100-<500	>100-<500	>100-<500	
Specimen 4:		>100-<500	>100-<500	>100-<500	
Minimum value:		>100-<500			
Performance Level:		1			
Remarks: Test performed as per client request.					

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

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2. Tear Resistance:

EN 388:2016+A1:2018 § 6.4

Pre-Treatment: Original State

Material: 1st Layer

	Unit	Direction	Results	Requirement
Specimen 1:	N	1	>75	/
Specimen 2:		1	>75	
Specimen 3:		2	>75	
Specimen 4:		2	>75	
Minimum value:		/	>75	
Performance Level:			4	
Remarks: Test performed as per client request.				

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

3. Puncture Resistance:

EN 388:2016+A1:2018 § 6.5

Pre-Treatment: Original State

Material: 1st Layer + 2nd Layer

	Unit	Results	Requirement
Specimen 1:	N	136	/
Specimen 2:		168	
Specimen 3:		139	
Specimen 4:		164	
Minimum value:		136	
Performance Level:		3	
Remarks: Test performed as per client request.			

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

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4. Contact Heat:

EN 407:2020 § 4.5.3

Tested in accordance with EN 12127-1:2015

Pre-Treatment: Original State

Material: 1st Layer + 2nd Layer

	Test Temperature T _c	Threshold Time t _t (Sec)	Test Temperature T _c	Threshold Time t _t (Sec)	Requirement
Specimen 1	100°C	32.0	250°C	11.8	/
Specimen 2	100°C	32.5	250°C	12.0	
Specimen 3	100°C	32.2	250°C	12.4	
Mean value	100°C	32.0	250°C	12.0	
Performance Level	1				
Observation	No sign of melting or holing observed.				

Test parameter	Table - Performance levels EN 407:2020 § 4.5.3			
	1	2	3	4
Contact temperature T_c (°C)	100°C	250°C	350°C	500°C
Threshold time t_t (sec)	≥ 15	≥ 15	≥ 15	≥ 15

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5. Cut Resistance – TDM:

ANSI/ISEA 105:2024 § 6.1.1

Test performed According to ASTM F2992-2023

Pre-Treatment: Original state

Machine Name/Model: STM 610

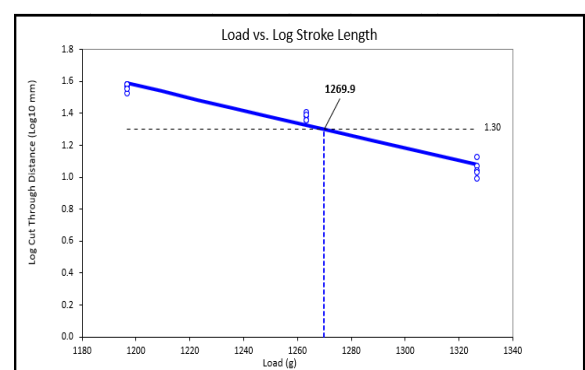
Blade Designation: GRU-GRU-TXTL BLD 88-0126-0000

Mass per unit area: /

Thickness of material: 2.05 mm

Material: 1st Layer + 2nd Layer

Sample cut	Avg. Force (gf)	Avg. Distance (mm)	Avg. Y(Normalized) (mm)	Y1=log10 y (mm)
1	1327	10.60	9.77	0.99
2	1327	12.80	11.76	1.07
3	1327	14.37	13.35	1.13
4	1327	12.03	11.00	1.04
5	1327	11.73	10.79	1.03
6	1263	24.53	22.71	1.36
7	1263	27.57	25.41	1.41
8	1263	26.30	24.28	1.39
9	1263	24.73	22.84	1.36
10	1263	26.43	24.47	1.39
11	1197	36.47	33.66	1.53
12	1197	41.43	38.39	1.58
13	1197	40.00	37.01	1.57
14	1197	41.50	38.25	1.58
15	1197	38.63	35.63	1.55
Interpolated force (gf) to cut after 20 mm of blade travel			1270	
Level Achieved			A3	



r ²	0.9497
Standard deviation, gf	13.55
95% Confidence limit, gf	±29.28
Calibration cut before, mm	21.98
Calibration cut after, mm	21.28

Level of performance for materials tested with ASTM F2992-2023									
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

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Specimen No. 1

Pre cut Rubber cut distance (mm)				23.10
Post cut Rubber cut distance(mm)				21.85
Blade sharp correction				0.89
Sample cut	Force (gf)	Distance (mm)	Y(Normalized) (mm)	
1	1250	11.5	10.23	
2	1250	16.8	14.95	
3	1250	11.1	9.88	
4	1250	19.2	17.09	
5	1250	15.0	13.35	
6	1180	22.0	19.58	
7	1180	32.5	28.92	
8	1180	30.8	27.41	
9	1180	27.0	24.03	
10	1180	25.1	22.34	
11	1100	41.1	36.57	
12	1100	36.7	32.66	
13	1100	40.4	35.95	
14	1100	48.5	43.16	
15	1100	45.1	40.13	

Specimen No. 2

Pre cut Rubber cut distance (mm)				21.85
Post cut Rubber cut distance(mm)				21.00
Blade sharp correction				0.93
Sample cut	Force (gf)	Distance (mm)	Y(Normalized) (mm)	
1	1330	13.90	12.98	
2	1330	12.00	11.20	
3	1330	15.30	14.28	
4	1330	9.90	9.24	
5	1330	11.10	10.36	
6	1280	31.40	29.31	
7	1280	26.00	24.27	
8	1280	20.10	18.76	
9	1280	24.10	22.50	
10	1280	29.10	27.16	
11	1220	34.30	32.02	
12	1220	48.50	45.27	
13	1220	38.50	35.94	
14	1220	42.50	39.67	
15	1220	35.80	33.42	

Specimen No. 3

Pre cut Rubber cut distance (mm)				21.00
Post cut Rubber cut distance(mm)				21.00
Blade sharp correction				0.95
Sample cut	Force (gf)	Distance (mm)	Y(Normalized) (mm)	
1	1400	6.40	6.10	
2	1400	9.60	9.14	
3	1400	16.70	15.90	
4	1400	7.00	6.67	
5	1400	9.10	8.67	
6	1330	20.20	19.24	
7	1330	24.20	23.05	
8	1330	28.00	26.67	
9	1330	23.10	22.00	
10	1330	25.10	23.90	
11	1270	34.00	32.38	
12	1270	39.10	37.24	
13	1270	41.10	39.14	
14	1270	33.50	31.90	
15	1270	35.00	33.33	

6. Fiber Composition:

ISO 1833, Part # 11:2017

Black Material	Results	Requirement
Aramid	95.85 %	/
Elastane	4.15 %	

Result Based on Moisture Regain of Aramid: 8.0%, Elastane: 1.5%

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

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