

Test Parameters
Tests Carried Out By Laboratories of Textiles Committee

1. PHYSICAL PARAMETERS

FIBRE: Cotton

1. Physical Parameters

SR. NO.	TEST PARAMETER	INSTRUMENT	TEST METHOD	SAMPLE SIZE (Min)	* TEST CHARGES (Rs)	Dwell TIME #
1.	Moisture Content	I.R. Oven Electronic Balance	IS 199 ASTM D2495	250 grams	300.0	1 day
2	Trash Content	Trash Separator	IS 4871 BS 2889 ASTM D5867 Textiles Committee Method	250 grams	300.0	1 day
3	Fibre Maturity (NaOH swelling method)	Microscope Projection Microscope	IS 236 BS 3085 ASTM D1442	250 grams	600.0	1 day
4	HVI Parameters: Upper half mean length Uniformity Index Span length, 2.5 and 50%(mm) Uniformity ratio CV% of length Short fibre % Colour grade Bundle tenacity at zero or 3mm gauge (Stelometer test) and elongation at break Fibre fineness (micronaire) using HVI	High Volume Instrument	ASTM D5867	250 grams	250.0	1- 2 days

FIBRE: Wool

SR. NO.	TEST PARAMETER	INSTRUMENT	TEST METHOD	SAMPLE SIZE (Min)	* TEST CHARGES (Rs)	Dwell TIME #
			ASTM D519(Wool Top) IWTO-17-67E			

1.	Wool Fibre length	Wool Fibre Diagram	IS 1377(Mean fibre length of wool) ISO 920	250 grams	500.0	2-3 days
2	Fibre fineness (Projection method)	Optical Fibre Diameter Analyzer -OFDA Projection Microscope	IS 744 ASTM D 2130 BS 2043 ISO 137	250 grams	500.0	1- 2 days
3	Fibre strength (single fibre measurement)	Universal Tensile Tester	BS 3411 IS 235	250 grams	1600.0	1- 2 days
4	Percentage medullated fibre content in wool fibre	Microscope Projection Microscope	BS 3209 ASTM D2968 IS 2899	250 grams	600.0	1- 2 days
5	Moisture content	I.R.Oven Electronic Balance	ASTM D1576 IS 6637	250 grams	300.0	1 day
6	Wool Fibre grade of raw wool	Projection Microscope	IS 744	250 grams	600.0	1-2ays

FIBRE :Man Made

SR. NO.	TEST PARAMETER	INSTRUMENT	TEST METHOD	SAMPLE SIZE (Min)	* TEST CHARGES (Rs)	Dwell TIME #
1.	Mean fibre length	Measuring Scale	BS 3697 ASTM D5103 IS 10014(PT 1)	250 grams	1000.0	1- 2 days
2	Titre (denier) by cut and weigh method	Electronic Balance Measuring Scale	IS 10014(PT 2)	250 grams	550.0	1 day
Tensile characteristics of individual fibre and elongation:						
3	Tenacity and elongation at break (single fibre)	Universal Tensile Tester	ASTM D3822 BS 3411 ISO 5079 IS 235	250 grams	2000.0	1- 2 days
	Elastic recovery by Instron		BS 4029		800.0	
	Modulus characteristics by Instron		ASTM D3822		800.0	

4	Fibre diameter / Linear density	Projection Microscope	IS 10014	250 grams	500.0	1- 2 days
5	Structural studies (IR Spectroscopic scan)	Infra Red Spectrophotometer	FTIR Method	250 grams	1600.0	1 day
YARN Physical Parameters						
SR. NO.	TEST PARAMETER	INSTRUMENT	TEST METHOD	SAMPLE SIZE (Min)	* TEST CHARGES (Rs)	Dwell TIME #
1.	Lea count with CV%	Autosorter	IS 1315	30 baby cones	250.0	1- 2 days
		Wrap reel	BS 2010 ISO 2060			
2	Friction of yarn (Yarn to solid material) / Hairiness	Hairiness Tester	ASTM D3108 / Textiles Committee method	30 baby cones	400.0	1 day
3	Strength of yarn / Tenacity:					
	Single thread strength / Tenacity with elongation (%)	Universal Tensile Tester	IS 1670 ASTM D2256 ISO 2062 BS 1932	30 baby cones	550.0	1- 2 days
	Rkm		IS 1670 & 1315 IS 1671 & IS 1315			
	Lea strength and count		BS 6372 ISO 6939		550.0	
4	Unevenness (U%) of					
	Yarn	Evenness Tester	ISO 16549	30 baby cones	550.0	1- 2 days
	Roving		ASTM D1425		550.0	
	Sliver				550.0	
Imperfection of yarn	Evenness Tester	ISO 16549 Textiles Committee Method	30 baby cones	550.0		
5	Denier of multifilament yarn	Electronic Balance Wrap Reel	Textiles Committee Method		300.0	1 day
	Twist per inch including direction of twist:		ASTM D1422 ASTM D1423			

6	Single yarn	Electronic Twist Tester	ISO 2061	30 baby cones	300.0	1- 2 days
	Piled yarn		IS 832		300.0	
	Single of piled / cabled yarn		BS 2085		500.0	
	Twist in filament yarn		ISO 2 (Direction of twist)		300.0	
	Balance of twist	Manual	ASTM D204		250.0	
7	Moisture content	I.R. Oven	IS 199		250.0	1 day
		Electronic Balance				

FABRIC: Physical Parameters

SR. NO.	TEST PARAMETER	INSTRUMENT	TEST METHOD	SAMPLE SIZE (Min)	* TEST CHARGES (Rs)	Dwell TIME #
1.	Dimensional Test:					
	Width and length	Measuring Scale	IS 1954	1 mtr X full width	150.0	1 day
			ASTM D3773-10			
			BS 1930			
			BS 1931			
	Weight per square / linear metre	Electronic Balance	Textiles Committee Method IS 1964	1 mtr X full width	200.0	1 day
Template						
Measuring Scale						
Thickness	Thickness Gauge	ASTM D3776		200.0		
2	Ends and picks	Pick Glass	BS 2862	1 mtr X full width	200.0	1 day
			IS 1963			
3	Count of yarn:	Electronic Balance	Textiles Committee Method ISO 7211/5	1 mtr X full width	200.0	1- 2 days
		Measuring Scale	BS 2865			
	As received					
	After removal of added matter					
4	Cover factor	-do-	Textiles committee Method	1 mtr X full width	600.0	1 day
			(Count, Th/inch method)			
5	Strength of yarn removed from fabric (Warp & Weft)	Universal Tensile Tester	IS 1670	1 mtr X full width	500.0	1-2 days

6	Tensile strength of fabric with	Universal Tensile Tester	IS 1969	1 mtr X full width		1-2 days
			ASTM D5035			
	BS 2576					
	ISO 5081					
At break		550.0				
At specified load, extra charge		150.0				
7	Seam breaking strength	-do-	ASTM D434	1 mtr X full width	550.0	1-2 days
8	Seam slippage	-do-	ASTM D434	1 mtr X full width	800.0	1-2 days
9	Grab test	-do-	ASTM D5034	1 mtr X full width	550.0	1-2 days
			ISO 5082			
10	Bonding strength of bonded fabric	-do-	ASTM D2724	1 mtr X full width	550.0	1-2 days
11	Permeability					
	water cone test	Funnel, measuring cylinder, retort stand	IS 7941	1 mtr X full width	400.0	1-2 days
	Air (low pressure test)	Air permeability Tester	ASTM D737	1 mtr X full width	400.0	2-3 days
			BS 5636			
	Water permeability	Pressure Head Tester	AATCC 127	1 mtr X full width	650.0	2-3 days
Textiles Committee Method						
Water repellency (Spray test)	Spray tester	ISO 4920	1 mtr X full width	400.0	1-2 days	
		AATCC 22				
		BS 3702				
12	Twist per inch of yarn removed from fabric (warp or weft)	Twist tester			500.0	
	Resultant		IS 832 ASTM D1422			

	Single yarn		BS 2864		500.0	1-2 days
	Single of piled / cabled yarn		ISO 7211-4	1 mtr X full width	650.0	
13	Tear resistance (Elmendorf)	Tearing Strength Tester	ASTM D1424	1 mtr X full width	400.0	1-2 days
			ISO 13937-1			
			BS 4303 IS 6489			
14	Tearing strength of fabric by tongue (single rip)	Tensile strength tester	ASTMD 2261	1 mtr X full width	550.0	1-2 days
15	Cease recovery – dry / wet	Crease Recovery meter	IS 4681	1 mtr X full width	550.0	1-2 days
			BS 3086			
			AATCC 66 ISO 2313			
16	Pilling resistance	Abrasion Tester	BSEN ISO-12945-1	1 mtr X full width	500.0	1-2 days
	· By Pill Box		ISO-12945-1			
	· By Tumble Pilling tester – Atlas		IS 10971			
	· Up to 1000 rubs (Martindale)		ASTM D4970			
	· Each additional 500 rubs (Martindale)		BS 5811		100.0	
17	Bursting strength	Bursting Strength Tester	ISO 2960	1 mtr X full width	500.0	1-2 days
			BS 4768			
			IS 1966(diaphragm method)			
18	Stiffness test	Stiffness Tester	IS 6490	1 mtr X full width	400.0	1-2 days
			BS 3356			
19	Type of weave / knitting	Magnifying Glass	Visual testing	1 mtr X full width	400.0	1 day
20	Abrasion resistance (Flex / Flat / Edge)	Abrasion Tester	ASTM D3886	1 mtr X full width	500.0	1-2 days
			ASTM D3885			
			IS 12673			
			ASTM D4966-10			

21	Abrasion resistance (Martindale)	Abrasion Tester	ISO 12947-1	1 mtr X full width		1-2 days
			ISO 12947-2			
	Up to 500 rubs		ISO 12947-3		500.0	
	ü Each additional 5000 rubs or fraction thereof - extra		ISO 12947-4		400.0	
			BS 5690			
			IS 12673			
22	Nature of yarn (Staple / Spun / Filament)	Manual	Visual testing	1 mtr X full width		1 day
	· Staple / Spun / filament and composition thereof				400.0	1 day
	· Texturised / Non-Texturised and composition thereof				500.0	1 day
	· High tenacity				600.0	1-2 days
23	Composition (Count wise / Denier wise)	Electronic Balance	Textiles Committee Method	1 mtr X full width	400.0	1 day
24	Melting point	Melting point Apparatus	ASTM D276	1 mtr X full width	400.0	1 day
25	Moisture content	Electronic Balance-	IS 199	1 mtr X full width	250.0	1 day
26	Percentage crimp	Crimp Tester	ISO 7211/3	1 mtr X full width	350.0	1 day
			ASTM D3883			
			BS 2863			
			IS 3442			
27	Fabric defect analysis / bleached / dyed / printed + applicable testing charges	U.V lamp	Visual Testing	1 mtr X full width	2000.0	2-4 days
		Pick Glass				
		Densitometer				
		Projection Microscope				
		I.R. spectrophotometer				
		Tensile Tester				
Auto Sorter						

28	Whiteness index – Instrumental	Colour Matching Spectrophotometer	AATCC 110	1 mtr X full width	350.0	1 day
		Colour meter	ISO 105-J02			
29	Data Colour system:					
	Colour difference		AATCC 173 ISO 105-J01		300.0	1 day
	Reflectance readings for calibration samples upto 8 level with spectral curve	Colour Matching Spectrophotometer	Spectrophotometer Method	1 mtr X full width	650.0	
	Whiteness / Yellowness evaluation comparison between them		Spectrophotometer Method		300.0	
Visual assessment of colour difference	Spectrophotometer Method		300.0			
30	Heat Shrinkage	Oven	IS method	1 mtr X full width	800.0	1-2 days
31	Nature of fabric					
	Woven / Knitted		Visual Testing	1/2 mtr X full width	200.0	1 day
	Dyed / Bleached / Yarns of different colour / Printed		Visual Testing	1/2 mtr X full width	250.0	1 day
	Piled / Flocked		Visual Testing	1/2 mtr X full width	200.0	1 day
	Coated / Laminated / Impregnated		Visual Testing	1/2 mtr X full width	250.0	1 day
	Upholstery		Visual Testing	1/2 mtr X full width	200.0	1 day
	Lining / Interlining		Visual Testing	1/2 mtr X full width	200.0	1 day
	Reinforce material		Visual Testing	1/2 mtr X full width	200.0	1 day
	Warp / Weft knitted		Visual Testing	1/2 mtr X full width	200.0	1 day
	Embroidery visible to naked eye		Visual Testing	1/2 mtr X full width	200.0	1 day
	Tufted / Non-tufted		Visual Testing	1/2 mtr X full width	200.0	1 day
Cut pile / Loop pile / Other		Visual Testing	1/2 mtr X full width	200.0	1 day	

* (Plus Service Tax as applicable) Conditions and testing service charges are Subject to Change without prior notice.

Working day only

Note: Test duration may vary with number of samples/ parameters/technical complexities etc