


Technical Specifications and Trial Directives of T-Shirt (Half/ Full Sleeves)

S.No.	Parameters	Technical Specifications	Standards	Trial Directives
1.	Approximate count of yarn (For guidance only)	80 Denier	IS 3442:1980	B.O.O. to verify the parameter through OEM Certificate
2.	Blend Composition, %	92 % Polyester 8 % Lycra (Spintex)	IS 667:1981 and IS 3416 (pt-1) : 1988 (Dry mass basis)	B.O.O. to verify the parameter through OEM Certificate
3.	Mass, gm/m ²	180±5 %	IS 1964 : 1970.	B.O.O. to physically check and verify through OEM Certificate
4.	Bursting Newton/cm ²	100±10	IS 1966 (Part-I) 2009 RA 2018/ ISO: 13938-1 (Hydraulic Method)	BOO to verify through lab test report issued by Govt/NABL accredited lab,
5.	Colour fastness to washing - Change in colour - Staining on adjacent fabric	4 or better 4 or better	- IS/ISO 105 C 10:2006 RA 2017 Test A (1)	B.O.O. to verify the parameter through OEM Certificate


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6.	Colour fastness to perspiration - Change in colour - -Staining on adjacent fabric	4 or better 4 or better	IS 971 : 1983 /ISO 971:1983/ IS/ ISO 105 E04: 2008 RA 2019	B.O.O. to verify the parameter through OEM Certificate
7.	Colour fastness to rubbing - Dry - Wet	4 or better 4 or better	- IS/ISO 105-X12:2001 RA 2016	BOO to verify through lab test report issued by Govt/NABL accredited lab,
8.	Colour fastness to light	4 or better (on blue wool)	- IS 2454 : 1985	BOO to verify through lab test report issued by Govt/NABL accredited lab,
9.	Dimensional Change due to relaxation, both directions, percentage, maximum	2.0	- IS 2977 : 1989 (RA 2020)/ ISO 6330 : 2021	B.O.O. to verify the parameter through OEM Certificate
10.	pH value of aqueous extract	6.0 - 8.5	IS : 1390 2022	BOO to verify through lab test report issued by Govt/NABL accredited lab,
11.	Colour	$\Delta E_{cmc} \leq 2.5$	-	B.O.O. to verify the parameter through OEM Certificate


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Slide Fastener				
12.	Designation	Medium - Chain width : 6.00 ± 0.3 mm - Thickness: 2.60 mm (min.)	- IS 14181 : 2002 (Part-I)	B.O.O. to verify the parameter through OEM Certificate
13.	Type	Closed end	- IS 14181 : 2002 (Part-I)	B.O.O. to physically check the parameter
14.	Colour	Orange	-	B.O.O. to physically check the parameter
15.	Security of interlocking of textile chain to cross wise strength	650 N	- IS 14181 : 2002 (Part-I)	BOO to verify through lab test report issued by Govt/NABL accredited lab,
16.	Security of attachment puller to slider	250 N	- IS 14181 : 2002 (Part)	BOO to verify through lab test report issued by Govt/NABL accredited lab,
17.	Security of slider lock holding	40 N	- IS 14181 : 2002 (Part)	BOO to verify through lab test report issued by Govt/NABL accredited lab,
Retro reflective Material				
18.	Colour	Silver	- Visual	B.O.O. to physically check the parameter

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19.	Co-efficient of retro reflection for separate performance material (Normal state without wash), cd/ (1x.m2), Minimum	330 (Coefficient of retro reflection at two rotation angles e1= 0 and e2- 90% should not differ) 15%	- BS EN ISO 204171 : 2013 (Observer angle 12", Entrance angle 5°	BOO to verify through lab test report issued by Govt/NABL accredited lab
Additional specifications of T-Shirt				
20.	-	Breathable / RET (Resistance to Evaporative Heat Transfer) <3.5 m ² Pa/W or less	ISO 11092 – 2014 IS 17376-2020 / IS 17416:2018	BOO to verify through lab test report issued by Govt/NABL accredited lab
21.	-	Thermal conductivity 0.3 W/mk or more	ASTM D 1518-14	BOO to verify through lab test report issued by Govt/NABL accredited lab
22.	-	Anti-fungal - No fungal growth	AATCC 30 (Part III) - 2017	B.O.O. to verify the parameter through OEM Certificate


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23.	-	Anti-bacterial Minimum Log 3 (99.9 %) reduction in Bacteria	JIS L 1902 : 2015/ ISO 20743	B.O.O. to verify the parameter through OEM Certificate
24.	-	Anti-viral Minimum Antiviral Activity of 2 Mv (>99% inactivation rate)	ISO 18184	B.O.O. to verify the parameter through OEM Certificate
25.	-	Drying Rate 1 ml/hr or more	AATCC 201	BOO to verify through lab test report issued by Govt/NABL accredited lab
26.	-	Anti UV / UV Protection UPF 50 (98% blockage of UV-A and UVB radiation) or more	AATCC 183	BOO to verify through lab test report issued by Govt/NABL accredited lab
27.	-	Banned Azo Colorants – Not detected	IS 15570: 2005	B.O.O. to verify the parameter through OEM Certificate
28.	-	Absorbency 3 sec (Max)	AATCC-79	B.O.O. to verify the parameter through OEM Certificate
29.	-	Wicking (time taken to reach 22 mm) 15 sec (Max)	AATCC-197	B.O.O. to verify the parameter through OEM Certificate
30.	-	Pilling resistance 4 or better	IS 10971 (Part 1) 2011 RA 2017	BOO to verify through lab test report issued by Govt/NABL accredited lab


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