



SRI LANKA INSTITUTE OF TEXTILE & APPAREL

Quality Control laboratory

List of Tests

| CODE | DESCRIPTION | TEST STANDARD | | | |
|------|--|----------------------|----------------------------|---|--|
| | | AATCC | BS | BS EN ISO | ISO |
| | <u><i>Colour Fastness Tests</i></u> | | | | |
| CF1 | Colour Fastness to Washing (Temp. 40°C - 60°C) | 61-2007 | C01-C03 | C01-C03 | C01-C03 |
| | (Temp. 70°C - 95°C) | | C04-C06 :1990 | C04-C06 :1997 C09 : 2003 | C04-C06 :1994 |
| CF2 | Colour Fastness to Perspiration | 15-2007 | E04:1990 | E04 : 1996 | E04 : 1994 |
| CF3 | Colour Fastness to Rubbing | 8-2007 | X12:1990 | X12 : 2002 | X12 : 2001 |
| CF4 | Colour Fastness to Light** | 16-2004 | BO2:1990 | BO2 : 1999 + A1 : 2002 | BO2 : 1994 +Amend 1 : 1998 +Amend 1 : 2000 |
| CF5 | Colour Fastness to Water | 107-2007 | EO1 : 1990 | E01 : 1996 | EO1 : 1994 |
| CF6 | Colour Fastness to Sea Water | 106-2007 | EO2 : 1990 | E02 : 1996 | E02 : 1994 |
| CF7 | Colour Fastness to Chlorinated Water | 162-2002 | | | |
| | Colour Fastness to Chlorinated Water | | EO3 : 1990 | E03 : 1997 | E03 :1994 |
| CF8 | Colour Fastness to Dry Cleaning | 132-2004 | DO1 : 1990 | DO1 : 1993, 95 | DO1 : 1993 |
| CF9 | Colour Fastness to Heat - Dry | 117-2004 | PO1 : 1990 | | PO1 : 1993 |
| CF10 | Colour Fastness to Heat (Hot Pressing) | 133-2004 | X11 : 1990 | | X11 : 1994 |
| CF11 | Colour Fastness to Bleaching - in home laundering - (Sodium Hypochlorite) | 188-2003 | | | |
| CF12 | Colour Fastness to Bleaching (Chlorine) | | NO1 : 1990 | | NO1 : 1990 |
| CF13 | Colour Fastness to Bleaching - Peroxide | 101-2004 | NO2 : 1990 | | NO2 : 1993 |
| | Colour Fastness to Organic Solvents | 157-2005 | XO5 : 1990 | | XO5 : 1994 |
| CF14 | Colour Fastness to Nitrogen Oxide | 164-2006 | GO1 : 1990 | | GO1 : 1993 |
| CF15 | Colour Fastness to Saliva and Perspiration (DIN 53160) | | | | |
| CF16 | Colour Fastness to Non Chlorine Bleaching in home laundering | 172-2007 | | | |
| DS1 | <u><i>Dimensional Stability (Shrinkage) Tests</i></u> * Dimensional Stability to Washing (F - Dry) (Garments & Fabric) | 135-2004 150-2003 | 5807 : 1987 4931 : 1986 | 5077 : 1984 6330 : 2001 3759 : 2008 | 5077 : 1984 6330 : 2000 3759 : 1994 |
| | * Dimensional Stability to Spirality | 179 - 2004 | | | |
| DS2 | * Dimensional Stability to Washing & T-Dry (Garments & Fabric) | 135-2004 150-2003 | | 5077 : 1984 6330 : 2001 3759 : 2008 | 5077 : 1984 6330 : 2000 3759 : 1994 |
| | * Dimensional Stability to Spirality | 179 - 2004 | | | |
| DS3 | Dimensional Stability to Relaxation | | 4736 : 1985 | | 7771 : 1985 |
| DS4 | Dimensional Stability to Dry Cleaning | 158-2005 | | | 3175 : 1998 |
| DS5 | Dimensional Stability to Steaming | | | | 3005 : 1978 |
| DS6 | * Appearance of Fabric after Repeated home Laundrying - Tumble Dry | 124 - 2006 | | | |
| | Do not Tumble Dry | 124 - 2006 | | | |
| DS7 | * Appearance of Apparel after Repeated home Laundrying - Tumble Dry | 143 - 2006 | | | 7768 : 1992 |
| | Do not Tumble Dry | 143 - 2006 | | | 7768 : 1992 |
| DS8 | Garment Cleansing | | | Bhs 910 | |

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|------|---|---------------------------------|------------------|--|--|
| | | BS | BS EN ISO | ISO | ASTM/AATCC |
| | <u>Water Resistant Tests</u> | | | | |
| WT1 | Water Resistance | | | 811 : 1980 | AATCC 127 - 2003 |
| WT2 | Water Repellancy (Spray Test) | | | 4920 : 1981 | AATCC 22 - 2005 |
| WT3 | Water Absorbency | | | | AATCC 79 - 2007 |
| | <u>Safety Tests</u> | | | | |
| S1 | pH Value of the Textiles | | | 3071 : 2005 | AATCC 81-2006 |
| S2 | Determination of Formaldehyde in Textiles JIS L 1041 - 1983 | 6806 : 1987 Part 1 Part 2 | | | AATCC 112-2003 |
| S3 | Flammability - Inclined - Domestic Laundering | | | | ASTM D 1230-2001 |
| S4 | Flammability - Vertical 16 CFR Part 1610 | | | | ASTM D 1230-2001 |
| | <u>Fabric Construction Tests</u> | | | | |
| FC1 | Weave - Simple (Structure) - Complicated | | | 7211/1 : 1984 | |
| FC2 | Fabric Yarn Count (Linear Density) - Woven & Knitted | 2865 : 1984 | | 7211/5 : 1984 | ASTM D 1059-2001 |
| FC3 | Mass Per Unit Area (Weight) - Woven/Knitted - Nonwoven | 2471 : 1978 | | 3801 : 1977, 84 9073 : 1989 | ASTM D 3776-2007 ASTM D 6242-1998 |
| FC4 | Threads Per Unit Length - Woven - Knitted | | | 7211/2 : 1984 | ASTM D 3775-2003 ASTM D 3887-2004 |
| FC5 | Stitch Density - Knitted | 5441 : 1988 | | | |
| FC6 | Fabric Width - Woven - Knitted | 1930 : 1990 1931 : 1968 | | 3932 : 1976 | ASTM D 3774-2004 |
| FC7 | Twist in Yarn Removed from Fabric | 2864 : 1989 | | 7211/4 : 1984 | |
| FC8 | Selvedge Width | | | | |
| FC9 | No.of Ends in Selvedge | | | | |
| FC10 | Crimp of Yarn in Fabric | 2863 : 1984 | | 7211/3 : 1984 | ASTM D 3883-2004 |
| FC11 | Loop Length | | | | |
| FC12 | Composition Analysis - Qualitative - Quantitative (2 Fibres) (3 Fibres) (4 Fibres) | 4407 : 1988 | | 1833 : 2006/07 | AATCC 20-2007 AATCC 20A-2007 ASTM D 629-1999 |
| FC13 | Colour Attributes | | | | |
| FC14 | Measurement of Garments (per piece) | | | | |
| FC15 | Design | | | | |
| FC16 | Print Type | | | | |
| | <u>Performance Tests</u> | | | | |
| P1 | Tensile Strength - Strip Method (Breaking Strength) - Grab Method | 2576 : 1986 | | 13934 - 1 : 1999 13934 - 2 : 1999 : 1999 | ASTM D 5035-2006 ASTM D 5034-2001 |
| P2 | Tearing Strength Tounge Tearing | BS 3424 Part 1 - 1982 | | 13937 - 1 : 2000 | ASTM D 1424-2007 |
| P3 | Bursting Strength | 4768 : 1972 | 13938 - 1 : 1999 | 13938 - 1 : 1999 | ASTM D 3786-2006 |
| P4 | Seam Slippage | 3320 : 1988 | 13936 - 1 : 2002 | 13936 - 1 : 2004 | ASTM D 434-1995 |
| P5 | Seam Strength - Strip - Grab | | | 13935 - 1 : 1999 13935 - 2 : 1999 | ASTM D 1683 - 2007 |
| P6 | Air Permeability | 5636 : 1990 | | 9237 : 1995 | ASTM D 737-2004 |
| P7 | Blocking | 3424 | 259 78 - 1993 | 59 78 : 1990 | |
| P8 | Rot Proofness | | | | AATCC 30-2004 |
| P9 | Types of Stitches | | | | |

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|------|--|---------------|----------------------------|------------------|-------------------------------|
| | | BS | BS EN ISO | ISO | ASTM/AATCC |
| P10 | Tension and Elongation of Elastic Fabric | | 14704-1 : 2005 | | ASTM D 4964 : 2004 |
| P11 | Stretch properties of Knitted Fabric (Low Power) | 4952 : 1992 | | | ASTM D 2594 : 2004 |
| P12 | Stretch properties of Fabric Woven from (Stretch Yarn) | | | | ASTM D 3107 : 2007 |
| P13 | Snap Attachment Strength (Button Attachment) | | | | ASTM D 4846 : 2007 |
| P14 | Zipper Attachment | | | | ASTM D 2061 : 2007 |
| P15 | Bond Strength (Laminated Fabric) | | | | AATCC 136 : 2003 ASTM 2724 |
| | <u>Wear Resistance Tests</u> | | | | |
| WR1 | Pilling Resistance | 5811 : 1986 | 12945 - 1 : 2001 | 12945-1-2000 | |
| WR2 | Random Tumble Pilling | | | | ASTM D 3512-2007 |
| WR3 | Abrasion Resistance (Up to 20,000 Rev.) (each addition 10,000 Rev.) | 5690 : 1991 | 2947 - 1,4 : 1999 | 12947 - 2 : 1998 | ASTM D 4966-2007 |
| WR4 | Martindale Pilling Test | | | 12945 - 2 : 2000 | |
| | <u>Fabric Handle Tests</u> | | | | |
| FH1 | Drape Coefficient | 5058 : 1973 | | | |
| FH2 | Wrinkle Recovery | | | 9867 : 1991 | AATCC 128 : 1999 |
| FH3 | Crease Recovery | | | 2313 : 1972 | AATCC 66 : 2003 |
| FH4 | Bow & Skewness - Woven & Knitted | 2819-1990 | | | ASTM D 3882 : 2006 |
| FH5 | Fabric Thickness - Woven | 2544-1987 | | 5084 : 1996 | ASTM D 1777 : 2007 |
| | Nonwoven | | | 9073/2 : 1995 | ASTM D 5736 : 2001 |
| | <u>Yarn Tests</u> | | | | |
| | | | CS | ISO | ASTM/AATCC |
| Y1 | Yarn Number (Count) - Skein Method | | 20-1996 | 2060 : 1994 | ASTM D 1907-2007 |
| Y1.1 | Yarn Number (Count) - Short Length Method | | | | ASTM D 1059-2001 |
| Y2 | Lea Strength | | 24-1968 | 6939 : 1988 | ASTM D 1578-2006 |
| Y3 | Single Yarn Strength | | 22-1995 | 2062 : 1993 | ASTM D 2256-2002 |
| Y4 | Yarn Twist | | | 2061 : 1995 | ASTM D 1423-2002 |
| Y5 | Yarn Evenness + Yarn Hairiness | | 674-1984 | | ASTM D 1425-1996 |
| Y6 | Yarn Friction | | | | ASTM D 3108-2007 |
| Y7 | Yarn Diameter | | | | ASTM D 2255-2007 |
| Y8 | Yarn Type | | | | |
| Y9 | No. of Intermingles of yarn | | | | |
| Y10 | No. of Filaments | | | | |
| Y11 | Total Yarn Length (Sewing Thread) | | | | |
| Y12 | Yarn Shrinkage | | | | ASTM D 2259-2006 |
| Y13 | Yarn Snarling | | | | |
| Y14 | Mercerization - Microscope - Analytical | | | | |
| Y15 | Wax/Oil Content - JIS 1096 | | | | |
| Y16 | Classimat Test | | | | |
| Y17 | Fibre Length | | | | |
| Y18 | Twist in Yarn Removed from Fabric | 2864 :1989 | | 7211/4:1984 | |
| | <u>General Test</u> | | | | |
| G1 | Moisture Content | | | 6741 : 1989 | |
| G2 | Phenolic Yellowing -Tesco App D | | BS EN ISO X - 18 : 2007 | | |

| CODE | DESCRIPTION | TEST STANDARD | | | |
|------|--|---------------|--|--|--------------------|
| | | LTD | | | ASTM |
| | <i>Limited Brand Standards</i> | | | | |
| L1 | Clear Elastic Load and Elongation | LTD 15 | | | |
| L2 | Hook to Eye attachment | LTD 16 | | | |
| L3 | Cross Staining of Cotrast Trims | LTD 22 | | | |
| L4 | Seam Stretchability | LTD 24 | | | |
| L5 | Appearance of Garment after repeated Home Laundering - Tumble Dry | LTD 28 | | | |
| | Do not Tumble Dry | | | | |
| L6 | Durability Wash | LTD 30 | | | |
| L7 | Power and Reovery (Stretch Fabric) | LTD 03 | | | ASTM D 2594 : 2004 |
| L8 | Load Elongation and Recovery (Elastic) | LTD 06 | | | ASTM D 5278 : 2004 |
| L9 | Bra Band Elongation | LTD 07 | | | |
| L10 | Colour Fastness to Chlorine Bleach | LTD 04 | | | |
| L11 | Colour Fastness to Non Chlorine Bleach | LTD 05 | | | |