**Textile Testing**

Textile Testing Laboratory of SLSI provides testing solutions for a wide range of products, according to an array of national (SLS) and international standards such as, ISO, BS EN, AATCC, ASTM etc.  
  
With competent and experienced technical staff, the laboratory utilizes standard testing methods and modern equipment to assist customers.  
Our product range is versatile .It includes both textiles and non textiles such as Yarns, Sewing thread, fabrics (woven and knitted), Apparels, Leather products, Geo textiles, Canvas sheets, Sanitary Napkins, Woven Polypropylene bags, Paper and Tissues, Umbrellas, Mattresses, Safety Gloves etc.  
  
Other than product testing, the laboratory staff provides in-house trainings on textile related testing ,participates in Technical Evaluation Committees for Textile & Apparel and provides technical know how for Textile industry.  
  
**Our main clients include**  
Sri Lanka Police  
Sri Lanka Navy  
Sri Lanka Army and  
Sri Lanka Air force  
We offer a quick and reliable testing service to our clients and ensure an extraordinary experience to them  
whenever they interact with us.   
  
**Items tested**

|  |  |  |  |  |  |  |  |  |  |
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|  | | | | | | | | **Example** | **Tests/Standards** |
| **1.Textiles ,Apparel and Leather** | | | | | | | |  |  |
| 1.1 Yarn and Sewing Thread | | | | | | | | Cotton Sewing | SLS 112:1996 |
|  | | | | | | | | Thread |  |
|  | | | | | | | | Spun polyester | SLS 757:1993 |
|  | | | | | | | | sewing  thread |  |
|  | | | | | | | |  | Linear density |
|  | | | | | | | |  | Breaking strength |
|  | | | | | | | |  | Shrinkage % |
|  | | | | | | | |  | Colour Fastness Properties |
| 1.2 Fabric and Apparel | | | | | | | |  |  |
|  | 1.2.1 Fabric | | | | | | |  |  |
|  |  | | | | 1.2.1.1 Woven | | | Shirting | Weave    ISO 7211/1 |
|  |  | | | |  | | | Trouser  material | Fabric width                             ASTM D 3774/BS 1930/ISO 3932 |
|  |  | | | |  | | | Sarees | Linear Density                         ISO 7211/5 |
|  |  | | | | | | | Bed sheets | Ends per inch, Picks per inch   ASTM D 3775/ ISO-7211/2 |
|  |  | | | | | | | Umbrella cloth | Mass per unit area                     ASTM D 3776/ /ISO-3801 |
|  |  | | | | | | |  | Composition of yarn                 ISO 1833-3:2006, |
|  |  | | | | | | |  | ISO 1833-5:2006,ISO1833-7:2006 ,ISO1833-11:2006 |
|  |  | | | | | | |  | Dimensional change on washing    ISO 5077/ DIN 53892, |
|  |  | | | | | | |  | DIN BS EN 25077 |
|  |  | | | | | | |  | Breaking strength (Strip Method)  ISO 13934-1:1999 |
|  |  | | | | | | |  | Breaking strength (Grab Method)  ISO 13934-1:1999 |
|  |  | | | | | | |  | Tearing Strength                             ISO 13937-4:2000 |
|  |  | | | | | | |  | Resistance to Abrasion                   ISO 12947-2:1998 |
|  |  | | | | | | |  | ISO 12947-3:1998 , ISO 12947-4:1998 |
|  |  | | | | | | |  | Fabric width                            ASTM D 1777/BS 2544/ ISO 5084 |
|  |  | | | | | | |  | Skew ness                               ASTM 3882/BS 2819 |
|  |  | | | | | | |  | Dimensional change on Cold water immersion |
|  |  | | | | | | |  | BS 4736/ ISO - 7771 |
|  |  | | | | | | |  | Crease recovery angle  DIN / BSEN22313 / ISO 2313 |
|  |  | | | | | | |  | Colour fastness to Light   ISO-105-BO2 |
|  |  | | | | | | |  | Colour fastness to Washing  ISO 105 E01 |
|  |  | | | | | | |  | Colour fastness to Perspiration  ISO-105 E04/ AATCC-15/ |
|  |  | | | | | | |  | BS-1006 E04 |
|  |  | | | | | | |  | Colour fastness to Hot pressing   ISO 105X11 |
|  |  | | | | | | |  | Colour fastness to Rubbing  BS EN ISO 105 x 12 |
|  |  | | | | | | | Cotton Gauze | SLS 395 |
|  |  | | |  | | | |  | Material Length , Width, Thread Count, Mesh  per inch |
|  |  | | | 1.2.1.2  Knitted | | | |  |  |
|  |  | | | | | \*Warp Knitted | | Mosquito nets | Shrinkage  ISO 5077/ DIN 53892, DIN BS EN 25077 |
|  |  | | | | |  | | Fishing nets | Composition  ISO 1833-3:2006 |
|  |  | | | | |  | |  | Dimensions |
|  |  | | | | |  | |  |  |
|  |  | | | | | \*Weft Knitted | | Tee Shirt, Vest, | Bursting Strength ISO 13938/1 SLS 1234/1 |
|  |  | | | | | | | Banion,Socks | Blend composition   ISO 1833 / ASTM D629/ISO-5088 |
|  |  | | | | | | |  | Yarn count               ASTM-D 1059 |
|  |  | | | | | | |  | Wales & Courses (Stitch Density)  ASTM D 3887/ BS5441 |
|  |  | | | | | | |  | Pilling  Resistance        ICI Pilling Box ISO 12945-1 / BS5811 |
|  |  | | | | | | |  | Colour fastness to light   BS EN ISO 105 BO2 |
|  |  | | | | | | |  | Colour fastness to washing  ISO 105 E01 |
|  |  | | | | | | |  | Colour fastness to Perspiration  ISO-105  E04 |
|  |  | | | | | | |  | Colour fastness to Dry & Wet Crocking/Rubbing |
|  |  | | | | | | |  | BS EN ISO 105 x 12 |
|  |  | | 1.2.1.3 Non Woven | | | | |  |  |
|  |  | | | 1.2.1.3.1Geo textiles | | | |  | Mass per unit area ASTM D5261-92 (03) ISO 9863-1:2005 |
|  |  | | |  | | | |  | Thickness  ASTM D5199-01 ISO 9863-1 |
|  |  | | |  | | | |  | Tensile Strength break BS EN ISO 10319:199 |
|  |  | | |  | | | |  | Water Permeability  ISO/DIS 10776  D4491-99a(2004) |
|  |  | | | 1.3.1.3.2 Sanitary napkins | | | |  | SLS 111 |
|  |  | | |  | | | |  | Absorbency, Length ,Width , |
|  |  | | |  | | | |  | Moisture content , Ash Content, PH |
|  |  | | |  | | | |  |  |
|  |  | | | 1.3.1.3.3 Coated materials | | | |  | Water Repellency , Water Penetration |
|  |  | | |  | | | |  | Strength, GSM ,Tear strengthBS EN ISO 4674-1:2003 |
|  | 1.2.2 Apparel | | | | | | |  |  |
|  |  | | | 1.2.2.1 Woven & | | | | Shirts,T-Shirts, | Full analysis including design |
|  |  | | | knitted wear | | | | Vests and  Banions | Seam Strength,Water repellency  ISO 4920:1981 |
|  |  | | | 1.2.2.2 Uniforms | | | |  | Colour fastness to washing  ISO 105 E01 |
|  |  | | | & overalls | | | |  | Colour fastness to light   BS EN ISO 105 BO2 |
|  |  | | | 1.2.2.3 Cloth Gloves | | | |  | Construction  ASTM D 3775/ ISO-7211/2 |
|  |  | | | 1.2.2.4 Caps | | | | Berets, caps, | Composition  ISO 1833:2006 |
|  |  | | |  | | | | peak caps | Mass per unit area      ASTM D 3776/ /ISO-3801 |
|  |  | | |  | | | |  | Shrinkage  ISO 5077/ DIN 53892, DIN BS EN 25077 |
| 1.3 Leather  Products | | | | | | | | Shoes,Bags, | Dimensions, Material, Flex resistance,  Shore Hardness |
|  |  | | |  | | | | Gloves | Tear strength,Thickness,Puncture  resistance |
| **Other products** | | | | | | | |  |  |
|  | | Mattresses | | | | |  | Rubberized coir | Indentation Hardness Index, Resistance to  ageing |
|  | |  | | | | |  | mattress | Compression Set  , PH Value (as per SLS 1333) |
|  | |  | | | | |  | PU Foam | Tensile Strength,  Elongation at break |
|  | |  | | | | |  | mattress | Tear Strength  , Dry heat ageing (as per SLS 1335) |
|  | | Umbrella | | | | |  |  | Full analysis as per  SLS 1207 |
|  | |  | | | | |  |  | Colour fastness to light |
|  | |  | | | | |  |  | Colour fastness to washing |
|  | |  | | | | |  |  | Water repellency and water penetration |
|  | | Woven Polypropylene Bag | | | | | |  | Full Analysis as per SLS 636 |
|  | |  | | | | |  |  | Bulk Strength |
|  | |  | | | | |  |  | Burst Strength |
|  | |  | | | | |  |  | Construction |
|  | | Polyethylene | | | | |  | Shopping bags, | Dimensions,Thickness,Gauge,Tensile  strength |
|  | |  | | | | |  | Garbage bags |  |
|  | |  | | | | |  |  |  |
|  | | Paper | | | | |  | Exercise books | SLS 382 |
|  | |  | | | | |  | Photo copy | Dimensions,GSM,  PH Value, Thickness |
|  | |  | | | | |  | paper |  |
|  | |  | | | | |  | Facsimile paper |  |
|  | |  | | | | |  | Calendars |  |
|  | | Tissue | | | | |  | Facial Tissue | SLS 1340 |
|  | |  | | | | |  | Toilet Tissue | SLS 798 |
|  | |  | | | | |  | Paper Towels | SLS 1338 |
|  | |  | | | | |  | Paper serviettes | SLS 1339 |
|  | | Safety Gloves | | | | |  |  | As per BS EN 60903:2003 following tests |
|  | |  | | | | |  |  | are carried  out in the textiles laboratory |
|  | |  | | | | |  |  | **Visual Inspection & Measurement** |
|  | |  | | | | |  |  | (Shape,Dimensions-length,width,thickness |
|  | |  | | | | |  |  | and defects) |
|  | | Men’s shoes | | | | |  |  | as per SLS 1290 |
|  | | Ladies shoes | | | | |  |  | as per SLS 1291 |
|  | | Safety Gloves | | | | |  |  | M**echanical Requirements** |
|  | |  | | | | |  |  | (Tensile strength & elongation at break, |
|  | |  | | | | |  |  | Tear Resistance, Puncture Resistance ) |
|  | |  | | | | |  |  | **Dielectric tests** are carried out in the Electrical Laboratory of SLSI. |