UNIVERSAL STRENGTH AND ELONGATION TESTING SYSTEMS

KFG-2070

Fabrics are the end result of many complex procedures and there are many factors that can influence their final quality and performance. An effective way of monitoring fabric quality is to conduct tensile and related strength tests at various stages of production. Ensures that your fabric has the strength and integrity for its intended purpose.

To ensure the high levels of accuracy and repeatability of results, we offer testing systems specifically designed for precise fabric testing. All models have grade 0.5 load cells with high resolution readout and grips specifically designed for fabric testing that have no slippage or jaw breaks and ensure correct values are measured. Single and dual column testers from 1 kn (200lb) to 100 kn (20,000lb) capacity are available.

When testing fabrics it is essential that the grips used will hold the material without slippage or damaging the material.

We offer a wide range of manual and pneumatic grips that are ideally suited for testing an extensive range of fabrics and similar materials. The testers can also be equipped for testing yarns, zippers, buttons and many other components. To allow us to provide you with the best offer to suit your particular requirements, please complete the questionnaire in our electronic catalog or on our website and email it back to us.

Software:

Our “Wintest” windows software package covers a complete range of fabric testing. It features pre-defined test methods that include all relevant calculations such as tensile strength, elongation, tear strength, seam strength, and burst strength, among others. Includes graphical results, reports, analysis and archiving.
Meets all international standards including:

ASTM D 434 Seam slippage strength of fabrics.
ASTM D 885 Test methods for tyre cord fabrics.
ASTM D 1117 Standard test methods for nonwoven fabrics.
ASTM D 1682 Tension and elongation of fabrics, strip method.
ASTM D 1683 Fabric failure of seams.
ASTM D 1775 Tension and elongation of wide elastic fabric.
ASTM D 2724 Test procedures for laminated apparel materials.
ASTM D 2970 Test methods for tyre cord fabric.
ASTM D 3107 Stretch properties of woven fabrics.
ASTM D 3787 Burst strength of knitted fabric.
ASTM D 4034 Yarn slippage in upholstery fabrics.
ASTM D 4851 Test methods for laminated fabrics used in roofing materials.
ASTM D 4964 Tension and elongation of elastic fabric.
ASTM D 5278 Narrow elastic static load tests.
ASTM D 5446 Properties of fabrics used in inflatable restraints.
ASTM D 5587 Tearing strength of fabric, trapezoid procedure.
ASTM D 5733 Tearing strength of nonwoven fabrics, trapezoid procedure.
ASTM D 5735 Tearing strength of nonwoven fabrics, tongue procedure.
ASTM D 5822 Seam strength of inflatable restraints.
ASTM D 6614 Fabric stretch properties.
ASTM D 6479 Edge-comb resistance of woven fabrics in inflatable restraints.
ASTM D 6775 Breaking strength and elongation of webbing, tape and braid.
ASTM D 6797 Bursting strength of fabric, ball burst method.
BS 2543 Seam slippage of upholstery fabrics.
BS 2576 Breaking strength and elongation of fabrics, strip method.
BS 3320 Slippage resistance of yarns in woven fabric.
BS 3424-4 Coated fabric breaking strength and elongation.
BS 3424-5 Coated fabric tear strength.
BS 3424-6 Coated fabric burst strength, ball method.
BS 3424-7 Coated fabrics coating adhesion.
BS 3424-10 Coated fabrics, determination of surface drag.
BS 4304 Resistance to tear, wing rip method.
BS 4952 Methods of test for elastic fabrics.
BS 5131 Seam Strength.
BS EN ISO 9073-4 Tear resistance of nonwovens.
BS EN ISO 13934-1 Tensile properties of fabrics.
BS EN ISO 13934-2 Tensile properties of fabrics, grab method.
BS EN ISO 13935-1 Seam strength, strip method.
BS EN ISO 13935-2 Seam strength, grab method.
BS EN ISO 13937-2 Tear properties of fabrics, trouser method.
BS EN ISO 13937-3 Tear properties of fabrics, wing rip method.
BS EN ISO 13937-4 Tear properties of fabrics, tongue method.

DIN 53356 Tongue tear tests on coated fabric.
DIN 53835-13 Fabric loading between constant strain limits.
DIN 53835-14 Knitted fabrics loading between force limits.
DIN 53859-4 Nonwovens tear, trouser method.
DIN 53859-5 Fabric tear, trapezoidal method.
DIN 53868 Seam slippage resistance.
DIN 53934 Displacement resistance of fabrics.
DIN EN 12332-1 Burst test, ball method.
EN ISO 1421 Tensile tests on coated textiles.
EN ISO 2411 Adhesive strength of coatings on fabrics.
EN ISO 4674-1 Tear tests on coated fabrics.
EN ISO 9073-4 Nonwovens tears, trapezoidal method.
EN ISO 13934-1 Fabric tensile tests, strip method.
EN ISO 13934-2 Fabric tensile tests, grab method.
EN ISO 13935-1 Fabric strip tensile tests on seams.
EN ISO 13935-2 Fabric grab tensile tests on seams.
EN ISO 13936-1 Seam opening of yarns in fabric, fixed opening.
EN ISO 13937-2 Fabric tear, trouser method.
EN ISO 13937-3 Fabric tear, wing rip method.
EN ISO 13937-4 Fabric tear, tongue method.
EN 1875-3 Trapezoidal tear of coated textiles.
ISO 4637 Adhesive strength of rubber coating.
ISO 9073-3 Strip tensile test for nonwovens.
ISO 9073-4 Tear resistance of nonwovens.
ISO 13936-1 Seam slippage, fixed opening method.
ISO 13936-2 Seam slippage, fixed opening method.
LTD 03 Power and recovery of stretch fabrics.
LTD 06 Elastic stretch and recovery.
LTD 07 Bra band elongation.
LTD 10 Comfort value of seamless garments.
LTD 11 Garment form load and elongation.
LTD 24 Seam stretchability of knitted garments.
P11 Fabric tensile strength.
P12 Seam slippage strength.
P13 Peel bond strength.
P14 Extension and modulus of elastomeric fabrics.
P14A Extension and modulus of stretch laces.
P14B Elastic properties of lycra fabrics.
P14C Extension and modulus of bare rubber tapes.
P15 Residual extension of stretch woven fabrics.
P15A Extension modulus and residual extension of stretch fabric.
P35 Baumann tear strength.
P42 Single tear strength.
P43 Breaking load and extension of woven and coated fabrics.
P98 Tear strength, wing rip method.
NXT 16 Slippage resistance.
NXT 21 Extension and modulus.
NXT 25 Wing rip tear test.
NXT 27 Breaking strength and elongation.
SL 2 Stretch test.
TM 177 Seam slippage.
TM 128 Dimensional stability.
TM 172 Tear, 5 highest peaks.
TM 264 Bond strength, 5 highest peaks.
UNIVERSAL STRENGTH AND ELONGATION TESTING SYSTEM QUESTIONAIRE

Customer ........................................................................................................................................ Contact .................................................................
Address ........................................................................................................................................... Telephone ................................................................
............................................................................................................................................. Fax ........................................................................
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PRODUCTS TO BE TESTED √

<table>
<thead>
<tr>
<th>Single Fibres</th>
<th>Yarns</th>
<th>Cords/Ropes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fabrics</td>
<td>Tape/Webbing</td>
<td>Laminates</td>
</tr>
<tr>
<td>Cords/Ropes</td>
<td>Tape/Webbing</td>
<td>Laminates</td>
</tr>
</tbody>
</table>

Others (describe) ................................................................................................................................

PRODUCT SIZES (min/max)

<table>
<thead>
<tr>
<th>Diameters (Denier)</th>
<th>Diameters (Count)</th>
<th>Diameters (mm/inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Widths (mm/inch)</td>
<td>Widths (mm/inch)</td>
<td>Test Widths (mm/inch)</td>
</tr>
</tbody>
</table>

TEST PARAMETERS (min/max)

<table>
<thead>
<tr>
<th>Expected loads</th>
<th>Units (grams, kg, pounds, N, KN)</th>
<th>Preload (if required)</th>
<th>Extension (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test length or gauge length (mm/inch, nip point to nip point)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test speed (mm/min or inch/min)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TYPE OF TEST √

<table>
<thead>
<tr>
<th>Load at break</th>
<th>Extension %</th>
<th>Tear strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seam slippage</td>
<td>Load at specific extension %</td>
<td>Extension % at specific load</td>
</tr>
<tr>
<td>Load at ball burst</td>
<td>Extension (mm/inch) at ball burst</td>
<td>Delamination strength</td>
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</tbody>
</table>

INTERNATIONAL TEST METHODS USED

<table>
<thead>
<tr>
<th>Standard</th>
<th>Number</th>
<th>Year</th>
</tr>
</thead>
</table>

REQUIREMENTS √

- Computer driven tester with appropriate accessories
- Tester with display console and appropriate accessories
- Computer Required (You may supply your own).
- Printer Required (You may supply your own).

If you require samples testing with printouts and graphs, please supply enough samples for at least 10 tests each of strongest and weakest product of each type.