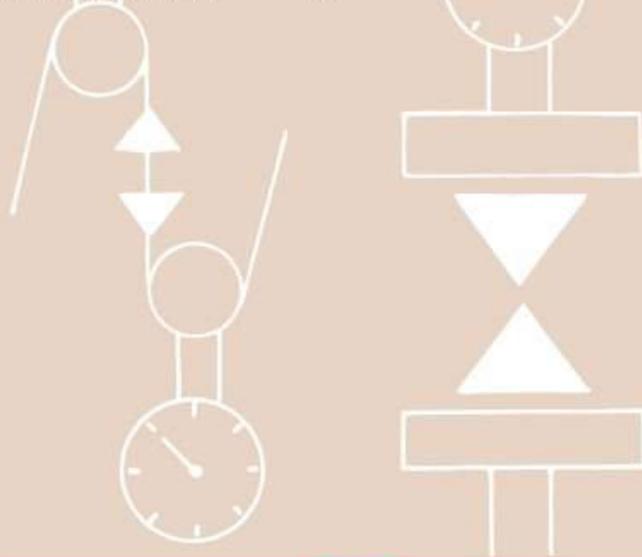


## UNIVERSAL TESTING MACHINES

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**Tinius  Olsen**

SDL Atlas is proud to have been appointed the Sole and Exclusive Sales and Service Representative for the Tinius Olsen Range of Universal Testing Machines and Ancillary Equipment Used in the Worldwide Textile and Leather Industries. The Range is briefly described in the following pages. For more information and to learn more about this fine equipment, contact your nearest SDL Atlas office or representative.



Model H5KS shown with HW11 grips



Model H5KT ready to perform a flexural test



Model H1KS testing paper strips; shown with HT50 tensile grips

### Technical Specifications

Model		H1K	H5K
Capacity	lbf	200 lbf	1,000 lbf
	kN	1 kN	5 kN
	kg	100 kg	500 kg
Maximum Sample Diameter	in	6	8
	mm	150	200
Load Cells	Rapid change Z beam load cells with digital encoding for automatic recognition and scaling		
		1kN, 500N, 250N, 100N, 50N, 10N, 5N	5kN, 2.5kN, 1kN, 500N, 250N, 100N, 50N, 10N, 5N
Maximum Crosshead Travel (excluding grips)	Measurement direct from ballscrew - fully auto scaling of single measurement range.		
	in	17.5	30
Testing Speed Range	mm	445	750
	in/min	0.00004 to 40 up to 100 lbf, 0.00004 to 20 up to 200 lbf	0.00004 to 60 up to 200 lbf, 0.00004 to 20 up to 1000 lbf
Jog Speed	mm/min	0.001 to 1000 up to 500N, 0.001 to 500 up to 1kN	0.001 to 1500 up to 1kN, 0.001 to 500 up to 5kN
	in/min	0.00004 to 40	0.00004 to 40
Return Speed	mm/min	0.001 to 1000	0.001 to 1000
	in/min	0.00004 to 40	0.00004 to 60
Dimensions HxWxD	mm/min	0.001 to 1000	0.001 to 1500
	in	32x14x14	45x20x18
Weight	mm	820x360x360	1140x490x450
	lb	55	110
	kg	25	50



5 Series Controller



Model H1KT testing a stuffed toy

**Single Column Models**

The single column materials testing machines have frame capacities of 1kN or 5kN (200 lbf or 1,000 lbf) and include two model types, namely the S series and the T series. These machines are designed to test a wide range of materials in tension, compression, flexure, shear and peel.

**S Series**

Using a combination of quality engineering and advanced technology, Tinius Olsen offers a series of machines that are accurate and simple to use. All S series machines feature an easy-to-read backlit liquid crystal display which can be switched between a numerical and graphical display. All data shown on this display is obtained in real time, with the autoranging graphical display showing the test curve of the specimen under test. The control unit features dedicated keys for moving the crosshead up, down, stop, performing the test as well as keys for load and extension tare and crosshead return. The control panel also features an alpha-numeric keypad to allow the input of test conditions, test data and the formatting of the test report. The control unit can retain up to five separate test routines for easy and rapid recall.

Powerful as stand-alone units, the machine capability is enhanced by direct connection of a printer through which comprehensive test reports and high resolution graphs can be quickly obtained. The S series of testers are also designed for users all over the world...an optional language module can be plugged into the control panel and all data on the backlit LCD display will be shown in the selected language. Language options include: English, French, Portuguese, German, Italian, Spanish and Polish.

**T Series**

Building on the quality and technology that is built into the S series, Tinius Olsen offers the T series of machines to

**Specifications:**

Load measurement accuracy:  $\pm 0.5\%$  of applied load from 2% to 100% capacity

Extended range down to 1% capacity with accuracy of  $\pm 1\%$  of indicated load

Position measurement accuracy: 0.01% of reading or 0.001mm, whichever is greater

Speed accuracy:  $\pm 0.005\%$  of set speed

**Notes:**

1. Load weighing system meets or exceeds the requirements of the following standards: ASTM E4, EN 10002-2, BS 1610, DIN 51221, ISO 7500-1. Tinius Olsen recommends that systems are verified at installation in accordance with ASTM E4 and ISO 75001.
2. Strain measurement system meets or exceeds the requirements of the following standards: ASTM E83, EN 10002-4, BS 3846 and ISO 9513.
3. These models conform to all relevant European CE Health and Safety Directives EN 50081-1, 580081-1, 73/23/EEC, EN 61010-1 4. Specifications are subject to change without notice

complement the popular and successful S series. The T series models have similar specifications to the S series, but they talk directly with a standard PC running a data analysis software package, via a high speed RS232 in both ASCII and super high speed binary modes.

**Common Features**

The S and T series use rapid change Z beam loadcells that allow for simple and quick 'sizing' of the machine to an appropriate capacity for the test. These loadcells have an accuracy of 0.5% of the applied load value, from 2% to 100% of the loadcell capacity.

The S and T series have a huge assortment of specimen grips and fixtures available, allowing the selection of an ideal grip for your application.

**Key Features**

- PC control via high speed RS232 using ASCII mode and super high speed binary mode
- Force accuracy of 0.5% of applied load across the loadcell display range
- Machines are proof loaded to 200% of capacity
- Displacement resolution of 0.0001mm (T series in binary mode)
- Speed resolution of 0.001 mm/min
- Built-in intelligent active force and displacement alarm system
- 32 bit precision motor controller
- 150% mechanical overload capacity on each loadcell
- 20% digital load tare while maintaining full load cell capacity
- Automatic motor drive alarms that monitor over/under voltage, current and temperature.

Operating temperature range: 32 to 100 °F (0 to 38 °C)

Storage temperature range: 14 to 115 °F (-10 to 45 °C)

Humidity range: 10% to 90% non-condensing, web bulb method

Power: Standard optional voltages 220/240VAC, 50-60 Hz, 2000W

Power must be free of spikes and surges exceeding 10% of the nominal voltage.

<b>ORDERING INFORMATION</b>		
300353	Single Column Universal Tester, Computer Driven, 1KN/200LBF capacity	
200283	Single Column Universal Tester, with console, 1KN/200LBF capacity	
200284	Single Column Universal Tester, Computer Driven, 5KN/1000LBF capacity	
200285	Single Column Universal Tester, with console, 5KN/1000LBF capacity	
HT5020	QMAT Pro for Textiles Software Package	
200574-200586	Load Cells, 5N, 10N, 25N, 50N, 100N, 250N, 500N, 1KN, 2KN, 5KN	
200574-HT4160	Grips and Accessories, see separate list	
G265	Silent Laboratory Compressor (Optional) for use with pneumatic grips only	
G278A	IBM Compatible Computer	
G278B	Ink Jet Printer	



Model H10KT being used with HT29 grips to test thin rope



Model H25KT using model HT40 grips to test fabrics



Model H50KT with HT21 grips

### Technical Specifications

Model		H10KS	H25KS	H50KT
Capacity	lbf	2,000	5,000	10,000
	kN	10	25	50
	kg	1,000	2,500	5,000
Clearance between columns	in	16	16	16
	mm	405	405	405
Load Cells	Rapid change, low profile Z type, load cells with digital encoding for automatic recognition and scaling			
		10kN, 5kN, 2.5kN, 1kN, 500N, 250N, 100N, 50N, 10N, 5N	25kN, 10kN, 5kN, 2.5kN, 1kN, 500N, 250N, 100N, 50N, 10N, 5N	50kN, 25kN, 10kN, 5kN, 2.5kN, 1kN, 500N, 250N, 100N, 50N, 10N, 5N
Maximum Crosshead Travel (excluding grips)	Measurement direct from ballscrew - fully auto scaling of single measurement range.			
	in	43	43	43
	mm	1100	1100	1100
Testing Speed Range	in/min	0.00004 to 40	0.00004 to 40	0.00004 to 20
	mm/min	0.001 to 1000	0.001 to 1000	0.001 to 500
Capacity at Max. Speed	lbf	1,000	2,000	5,000
	kN	5	10	25
Max. Speed at Capacity	in/min	20	20	10
	mm/min	500	500	250
Jog Speed	in/min	0.00004 to 40	0.00004 to 40	0.00004 to 20
	mm/min	0.001 to 1000	0.001 to 1000	0.001 to 500
Return Speed	in/min	0.00004 to 40	0.00004 to 40	0.00004 to 20
	mm/min	0.001 to 1000	0.001 to 1000	0.001 to 500
Dimensions HxWxD	in	63x26x18	63x26x18	64x29x20
	mm	1600x650x450	1600x650x450	1613x720x500
Weight	lb	255	265	310
	kg	115	120	140

## Dual Column Models

The dual column materials testing machines have frame capacities of 10kN, 25kN and 50kN (2000 lbf, 5,000 lbf and 10,000lbf) and include two model types, the S series and the T series. These machines are designed to test a wide range of materials in tension, compression, flexure, shear and peel.

### S Series

Using a combination of quality engineering and advanced technology, Tinius Olsen offers a series of machines that are accurate and simple to use. All S series machines feature an easy-to-read backlit liquid crystal display which can be switched between a numerical and graphical display. All data shown on this display is obtained in real time, with the autoranging graphical display showing the test curve of the specimen under test. The control unit features dedicated keys for moving the crosshead up, down, stop, performing the test as well as keys for load and extension tare and crosshead return. The control panel also features an alpha-numeric keypad to allow the input of test conditions, test data and the formatting of the test report. The control unit can retain up to five separate test routines for easy and rapid recall.

Powerful as stand-alone units, the machine capability is enhanced by direct connection of a printer through which comprehensive test reports and high resolution graphs can be quickly obtained. The S series of testers are also designed for users all over the world...an optional language module can be plugged into the control panel and all data on the backlit LCD display will be shown in the selected language. Language options include: English, French, Portuguese, German, Italian, Spanish and Polish.

### T Series

Building on the quality and technology that is built into the S series, Tinius Olsen offers the T series of machines to

### Specifications:

**Load measurement accuracy:** ± 0.5% of indicated load from 2% to 100% capacity; extended range down to 1% capacity with accuracy of 1% of indicated load

**Position measurement accuracy:** ± 0.01% of reading or 0.001 mm, whichever is greater

**Speed accuracy:** ± 0.005% of set speed

### Notes:

1. Load weighing system meets or exceeds the requirements of the following standards: ASTM E4, EN 10002-2, BS 1610, DIN 51221, ISO 7500-1. Tinius Olsen recommends that systems are verified at installation in accordance with ASTM E4 and ISO 75001.

2. Strain measurement system meets or exceeds the requirements of the following standards: ASTM E83, EN 10002-4, BS 3846 and ISO 9513. 3. These models conform to all relevant European CE Health and Safety Directives EN 50081-1, 580081-1, 73/23/EEC, EN 61010-1 4. Specifications are subject to change without notice.

complement the popular and successful S series. The T series models have similar specifications to the S series, but they talk directly with a standard PC running a data analysis software package, via a high speed RS232 in both ASCII and super high speed binary modes.

### Common Features

The S and T series use rapid change Z beam loadcells that allow for simple and quick 'sizing' of the machine to an appropriate capacity for the test. These loadcells have an accuracy of 0.5% of the applied load value, from 2% to 100% of the loadcell capacity.

The S and T series have a huge assortment of specimen grips and fixtures available, allowing the selection of an ideal grip for your application.

### Key Features

- PC control via high speed RS232 using ASCII mode and super high speed binary mode
- Force accuracy of ±0.5% of applied load across the loadcell display range
- Machines are proof loaded to 200% of capacity
- Displacement resolution of 0.0001mm (T series in binary mode)
- Speed resolution of 0.001 mm/min
- Built-in intelligent active force and displacement alarm system
- 32 bit precision motor controller
- 150% mechanical overload capacity on each loadcell
- 20% digital load tare while maintaining full load cell capacity
- Automatic motor drive alarms that monitor over/under voltage, current and temperature.

**Operating temperature range:** 32 to 100 °F (0 to 38 °C)

**Storage temperature range:** 14 to 115 °F (-10 to 45 °C)

**Humidity range:** 10% to 90% non-condensing, web bulb method

**Power:** standard optional voltages 220/240VAC, 50-60 Hz, 2000W; power must be free of spikes and surges exceeding 10% of the nominal voltage.

ORDERING INFORMATION		
200286	Dual Column Universal Tester, Computer Driven, 10KN/2000LBF capacity	
200287	Dual Column Universal Tester,With console, 10KN/2000LBF capacity	
H25KT	Dual Column Universal Tester, Computer Driven, 25KN/5000LBF capacity	
H25KS	Dual Column Universal Tester,With console, 25KN/5000LBF capacity	
H50KT	Dual Column Universal Tester, Computer Driven, 50KN/10000LBF capacity	
H50KS	Dual Column Universal Tester,With console, 50KN/10000LBF capacity	
HT5020	QMAT Pro for Textiles Software Package	
200574-200586	Load Cells, 5N, 10N, 25N, 50N, 100N, 250N, 500N, 1KN, 5KN, 25KN, 50KN	
200574-HT4160	Grips and Accessories, see separate list	
G265	Silent Laboratory Compressor (Optional) for use with pneumatic grips only	
G278A	IBM Compatible Computer	
G278B	Ink Jet Printer	



## Load cells

200586	50kN load cell
200585	25kN load cell
202427 (L) 200584 (S/T)	10kN load cell
200583	5kN load cell
200582	2.5kN load cell
200581	1kN load cell
200164 (L) 200580 (S/T)	500N load cell
200163 (L) 200579 (S/T)	250N load cell
200578	100N load cell
200577	50N load cell
202428 (L) 200576 (S/T)	25N load cell
200575	10N load cell (supplied with rubber faced clip grip)
200574	5N load cell (supplied with rubber faced clip grip)



## Pneumatic Grips

200617 (S/T) 200169 (L)	Pneumatic grips - faces / control unit not included
200616	25 x 25mm rubber faced jaws
200615	25 x 50mm rubber faced jaws
200167 (L) 200614 (S/T)	25 x 75mm rubber faced jaws
300581	25 x 100mm rubber faced jaws
300586	25 x 25mm plain steel jaws
200613	25 x 50mm plain steel jaws
200612	25 x 75mm plain steel jaws
200611	25 x 25mm fine serrated jaws
200610	25 x 50mm fine serrated jaws
200609	25 x 75mm fine serrated jaws
200608	25 x 100mm fine serrated jaws
200607	2 each 25 x 75mm & 2 each 25 x 25mm rubber faced jaws (grab test)
303612	25 x 75 plain steel faces & line contact jaws
300584	50 x 75mm serrated jaws
HTP4519	50 x 75mm rubber faced jaws
300588	25 x 25 mm sandvic jaws
200606	25 x 50 mm sandvic jaws
200605	25 x 75 mm sandvic jaws
300587	50 x 75mm cross hatch jaws

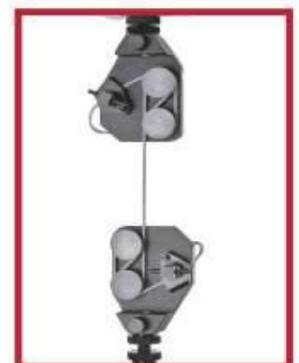


## Control Units

200175 (L) 200678 (S/T)	Pneumatic control unit (foot switch control including regulator & gauge) Footswitch not included
200679	Foot switch for use with control units

## Pneumatic yarn testing

200603	Lightweight pneumatic grips including special pneumatic control unit
401700	Pneumatic horn grips (1.5KN) - not including pneumatic control unit
202880	Pneumatic horn grips (3KN) - not including pneumatic control unit



### Yarn / Cord grips

200635	Split horn cord grips (5kN) max sample diameter 10mm
200633	Single horn grips
HTY160	Manual cord grip
300741	Disc wire grips

### Manual Grips

202595	Heavy duty vice grips - faces not included
202596	Corrugated jaw set
300538	Plain faced aluminium jaw set
200644	Steel crosshatch jaw set
300532	Rubber faced jaw set
300534	2 each 25 mm jaws & 2 each 50 mm rubber faced jaws (grab set)
300533	2 each 25 mm jaws & 2 each 75 mm rubber faced jaws (grab set)
300535	25 mm & 25 mm jaws rubber faced
300536	25 mm & 50 mm jaws rubber faced
300537	25 mm & 75 mm jaws rubber faced
200643	Medium duty vice grips - faces not included
200642	Corrugated jaw set
200641	Rubber faced jaw set
300541	Plain faced aluminium jaw set
300542	Steel crosshatch jaw set
300543	2 each 50 x 25mm & 2 each 25 x 25mm rubber faced jaws (grab)
200171	2 each 25 x 75mm & 2 each 25 x 25mm rubber faced jaws (grab)
200640	25 x 75mm rubber faced jaws
300548	Medium duty vice grips latched opening - faces not included

### Burst Testing

300434	Burst strength test attachment (ASTM D751)
200651	Burst attachment ASTM D3787

### Bra Wire puncture

200650	Bra wire puncture test attachment (M&S)
202462	Bra wire puncture test attachment (NEXT)

### Loop Bars

300524	Loop bars as per BS4952 standard 75mm wide sample
200637	Loop bars as per BS4952 100mm wide sample
200636	L profile loop bars for Limited Inc. Test Method 10
300526	Victoria's Secret loop bars (100N)
300527	Loop bars 100mm sample width (200N)

### Skein Grips

200631	Skein grips
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### Button testing

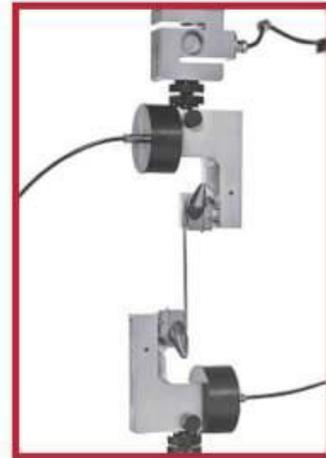
200630	Button test attachment (Security of attachment test)
202677	Button test attachment with cover (BS4162) requires grips.



**Zipper Testing**

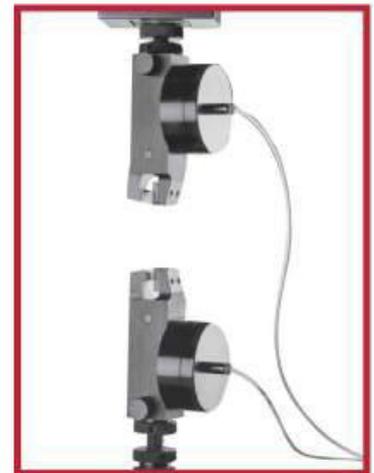
\*\*\* Samples must be sent when ordering any of the zip tests \*\*\*

- 300755 UTH415 Zip test BS3084 Test 1 puller attachment
- 300750 Zip test BS3084 Test 2 closed end test jaw faces (1 set straight, serrated or plain) requires grips.  
(Zip test BS3084 Test 3 top stop test use jigs from Tests 1 & 2)
- 300751 Zip test BS3084 Test 4 open end fastener box test, requires HTZ411 grips.
- 200649 UTH413 Zip test BS3084 Test 6 lateral strength test jaw faces(1 set - straight, serrated or plain) requires grips.
- 300754 UTH414 Zip test BS3084 Test 7 lateral strength of open end test
- 300756 UTH435 Element pull off test (DIN3419 5.2.3.2)
- 300757 UTH700 Zip element slippage (lengthwise) test



**Shoe testing**

- 300482 Upper heel clamp PM113 9 (Ladies Shoes)
- 300483 Pincer grip for sole Edge BS5131 (Ladies Shoes)
- 300484 Heel clamp PM113
- 300485 Shoe test-50mm wide heel clamp
- 300486 EN344 Pincer grip for mens shoes
- HTF569 EN344 Energy absorption test
- 300488 EN344 Nail penetration test
- 300489 EN344 Compression test



**General testing**

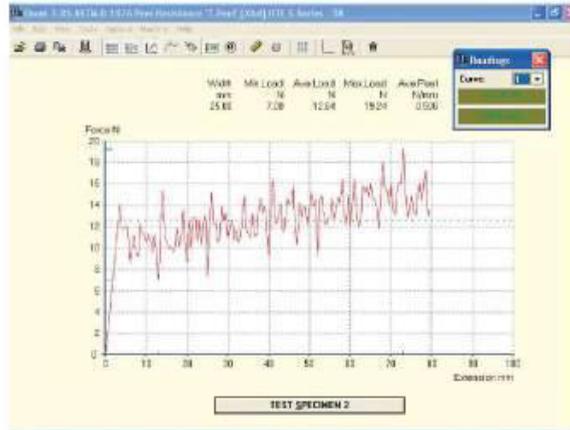
- HTG0148 Tear hooks for leather tear test, BS 3144
- HTG2200 Scissor action grip
- HTG3600 Knurled roller grips
- HTG3800 Double roller gavin type grips
- HTG5200 Knurled roller grips
- HTG5500 Ultra light vice grips latched opening - 60mm Sample width
- HTG5501 Ultra light vice grips latched opening - 100mm sample width



Software

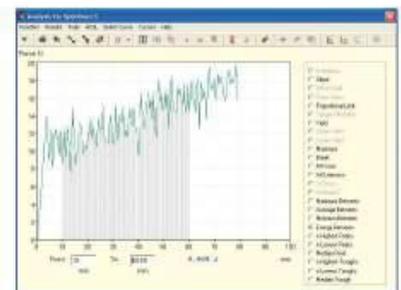
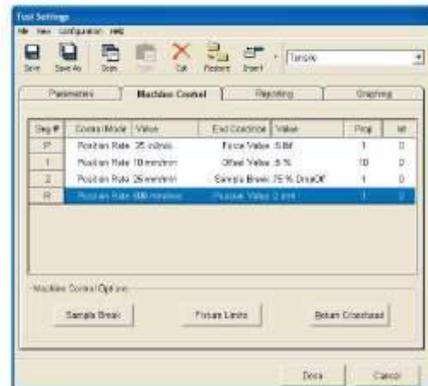
Building on our long history of providing solutions to an enormous variety of testing problems, Tinius Olsen offers a comprehensive range of software products, each designed to make testing simple, precise and efficient, no matter whether the material is metal, paper, composite, polymer, rubber, textile or micro components. Tinius Olsen software goes far beyond basic module changes for unique applications; instead, specific and focused application software products have been developed in close cooperation with our customers around the world.

There are several valuable features that are common to all, perhaps the most important is the ability to further customize the testing parameters that are used to collect and document testing data, as well as control the testing machine. Specifically, our range of application software is for data acquisition, data analysis and also closed loop control of Tinius Olsen testing machines that have a compatible servo system or fourquadrant drive.



All versions of our focused application software are rich with standard features that improve productivity and enable you to build, access and use a powerful materials testing database:

- Use of modern databases.
- Generation of user customized reports.
- Standard SPC programs for X-bar, R and frequency distributions/ histograms.
- Ability to recall, replot and rescale curves.
- Recall of data that spans different test modules.
- User-configurable machine parameter and control settings.



**ORDERING INFORMATION** HT5020 QMAT Pro for Textiles Software Package

## QMAT Textile Test Methods And Procedures

Almost 300 Textile test methods and procedures are embedded into the Unique QMAT Pro for Textiles Software Package and more are added regularly. New methods approved for use by SDL Atlas and Tinius Olsen will be downloadable on request by registered TEXMAT users.

Inclusion of methods within the software ensures tests are carried out using the correct parameters such as speed, pretension, gage length, units and report formats among others. We cooperate in this area with most International Standards Organizations, Major Retailers and Textile Manufacturers as well as Government and Military Specifiers.

If you or your organization are involved in writing or setting Textile Standards requiring the use of Universal testers and you are not included in our list, please contact us.

### QMat 5.54 Test Routines Database Test methods available (28-Oct-2010)

Standard Type	Test Reference	Title	Test type
A.W.R.	AW30-001	A.W.R TM 30 (Australian Wool Research)	Tensile
A.W.R.	AW31-001	A.W.R TM 31 (Australian Wool Research)	Seam
A.W.R.	AW32-001	A.W.R TM 32 (Australian Wool Research)	Tear
A.W.R.	AW33-001	A.W.R TM 33 (Australian Wool Research)	Tensile
A.W.R.	AW35-001	A.W.R. TM35 (Australian Wool Research)	Friction
AATCC	AATM-136	AATCC TM 136-2003 Bond Strength of Bonded and Laminated Fabric	Peel
AATCC	AATM-015	AATCC TS-015:2004 Seam Stretchability of Knitted Garments	Seam
Adidas	ADT4-10A	Adidas TM 4.10: 2006 Tensile Strength - Strip Method (Rugby)	Tensile
Adidas	ADT4-11A	Adidas TM 4.11: 2006 Tensile Strength for Woven Fabrics (Grab Method)	Tensile
Adidas	ADT4-12A	Adidas TM 4.12:2004 Elongation of Elastic Fabrics	Cycle
Adidas	ADT4-13B	Adidas TM 4.13: 2006 Seam Slippage - Woven Fabrics	Seam
Adidas	ADT4-14A	Adidas TM 4.14: 2004 Tear Growth Resistance	Tear
Adidas	ADT4-15A	Adidas TM 4.15: 2006 Button Hole Tearing Strength - Rugby	Tensile
Adidas	ADT4-27A	Adidas TM 4.27: 2006 Elongation of Elastic Fabrics C-Clamp	Cycle
AS	A200-210	AS 2001.2.10 - Wing Rip	Tear
AS	A200-120	AS 2001.2.20 - Seam Breaking Force	Seam
AS	A200-122	AS 2001.2.22 (1986) Yarn Slippage	Seam
AS	A200-102	AS 2001.2.3 - Breaking Force & Ext	Tensile
AS / NZ	A211-115	AS/NZ Method 2111.15 - Tuft Withdrawal	Tensile
AS / NZ	A211-116	AS/NZ Method 2111.16 - Bond Strength	Peel
ASTM	ASD1-294	ASTM D 1294-05 Tensile Strength and Breaking Tenacity of Wool Fiber Bundles	Tensile
ASTM	AS16-83C	ASTM D 1683:2004 Failure in Sewn Seam of Woven Apparel	Seam
ASTM	AS20-61F	ASTM D 2061;1998 - Bottom Stop Holding - Crosswise	Tensile
ASTM	AS20-61E	ASTM D 2061;1998 - Bottom Stop Holding - Slider	Tensile
ASTM	AS20-61G	ASTM D 2061;1998 - Bottom Stop Holding - Stringer Separation	Tensile
ASTM	AS20-61H	ASTM D 2061;1998 - Bridge Top Stop - Stringer Separation	Tensile
ASTM	AS20-61B	ASTM D 2061;1998 - Element Pull-Off	Tensile
ASTM	AS20-61C	ASTM D 2061;1998 - Element Slippage Lengthwise	Tensile
ASTM	AS20-61J	ASTM D 2061;1998 - Fixed Retainer - Pull Off	Tensile
ASTM	AS20-61O	ASTM D 2061;1998 - Holding Strength of Slider Lock	Tensile
ASTM	AS20-61N	ASTM D 2061;1998 - Resistance to Angular Pull-Off of Slider Pull	Tensile
ASTM	AS20-61L	ASTM D 2061;1998 - Resistance to Cushioned Compression	Compression
ASTM	AS20-61M	ASTM D 2061;1998 - Resistance to Pull-Off of Slider Pull	Tensile
ASTM	AS20-61I	ASTM D 2061;1998 - Separable Pin - Pull Off	Tensile
ASTM	AS20-61K	ASTM D 2061;1998 - Separating Unit - Crosswise	Tensile
ASTM	AS20-61D	ASTM D 2061;1998 - Top Stop Holding	Tensile
ASTM	AS20-61A	ASTM D 2061;1998 Chain Crosswise Strength	Tensile
ASTM	AS22-12B	ASTM D 2212 : 1989 Slit Tear Resistance of Leather	Tear
ASTM	ASD2-256	ASTM D 2256;1997 Tensile Properties of yarns (single-strand)	Tensile
ASTM	AS22-61B	ASTM D 2261;1996 Fabric Tongue Tear Strength - Opt 1 & 2	Tear

## QMAT Textile Test Methods And Procedures

ASTM	AD25-24A	ASTM D 2524-95 (2003) Breaking Tenacity of Wool Fibers - Flat Bundle Method	Tensile
ASTM	ASD2-612	ASTM D 2612-99 (2005) Fiber Cohesion in Sliver and Top (Static tests)	Tensile
ASTM	AS27-24A	ASTM D 2724 - 03 Bond Strength of Bonded and Fused Fabrics	Bonding
ASTM	AS27-24B	ASTM D 2724 - 03 Bond Strength of Laminated Fabrics	Bonding
ASTM	A310-702	ASTM D 3107;1980 Fabric Stretch and Growth	Tensile
ASTM	A310-701	ASTM D 3107;1980 Stretch Properties of Woven Fabrics	Tensile
ASTM	ASD3-787	ASTM D 3787;2001 Bursting Strength of Textiles - Ball Burst Test	Compression
ASTM	ASD3-822	ASTM D 3822 Tensile Properties of Textile Fibres	Tensile
ASTM	AS40-34A	ASTM D 4034;1992 Yarn Slippage for Upholstery	Seam
ASTM	ASD4-533	ASTM D 4533 Trapezoid Tearing of Geotextiles	Tear
ASTM	AS46-32X	ASTM D 4632:1996 Grab Breaking Load and Elongation of Geotextiles	Tensile
ASTM	ASD47-04	ASTM D 4704;1998 - Tearing Strength Tongue Tear of Leather	Tensile
ASTM	ASD4-833	ASTM D 4833 Puncture Resistance of Geotextiles	Compression
ASTM	AS49-64F	ASTM D 4964 (open-Cycle) Tension/Elongation of Elastic Fabrics with 3 Ld and Ex targets	Cycle
ASTM	ASD4-964	ASTM D 4964 Tension/Elong of Elastic Fabrics	Tensile
ASTM	AS49-64C	ASTM D 4964 Tension/Elongation of Elastic Fabrics (based on)	Tensile
ASTM	AS49-64E	ASTM D 4964:1996 (Modified) Tension/Elongation of Elastic Fabrics	Cycle
ASTM	AS49-64B	ASTM D 4964:1996 Tension/Elongation of Elastic Fabrics	Tensile
ASTM	ASD5-034	ASTM D 5034;2008 Breaking Force & Elongation - Grab Test	Tensile
ASTM	ASD5-035	ASTM D 5035-06(2008) Breaking Force and Elongation of Textile Fabrics (Strip Method)	Tensile
ASTM	AS51-70A	ASTM D 5170 : 98 Hook and Loop Touch Fasteners - Peel Strength (T Method)	Peel
ASTM	ASD5-587	ASTM D 5587;1996 Tear Strength Opt.1 (Trapezoid)	Tear
ASTM	ASD5-733	ASTM D 5733:1995 Non-Woven Fabric Trapezoidal Tear	Tear
ASTM	AD66-14A	ASTM D 6614-00 Textile Fabric Stretch - CRE Method	Tensile
ASTM	AD66-14b	ASTM D 6614-00 Textile Fabric Stretch - CRE Method with Recovery	Cycle / Hold
ASTM	D714-2a1	ASTM D 7142-05 Holding Strength of Prong-Ring Attached Snap Fasteners - Opt1	Tensile
ASTM	ASSH-SP1	ASTM D434;1995 ASTM D5034;1995 Resistance to Slippage Seam Strength and Fabric Strength	Seam
ASTM	LTAS-SP1	ASTM D434;1995 ASTM D5034;1995 Resistance to Slippage Seam Strength and Fabric Strength	Seam
ASTM	AS43-405	ASTM D434;1995 Resistance to Slippage of Yarns & Seam Strength	Seam
BHS	BHSL-IP4	BHS 1 & 4A;1999 Tensile & Seam Properties	Seam
BHS	BHS1-5H2	BHS 15H Elastic Stretch with UnAged and Aged pairs	Cycle
BHS	BHS0-15J	BHS 15J;1999 Stretch and Recovery	Cycle
BHS	BHS1-601	BHS 16;1999 Peel test	Peel
BHS	BHS-4B0	BHS 4B;2004 Seaming Properties of Woven Garments	Seam
BS	BS18-77A	BS 1877-10:1997 [5-1-1-5] Domestic Bedding Slippage Resistance - Fixed Load	Seam
BS	BS18-77B	BS 1877-10:1997 [5-2-4] Domestic Bedding Attachment Strength	Creep / Hold Load
BS	BS18-77C	BS 1877-10:1997 [5-2-5] Domestic Bedding Ties or Decorative Features	Creep / Hold Load
BS	B193-22A	BS 1932:Part 2 Knot Strength of Yarn and Thread [Xhd]	Tensile
BS	B193-22B	BS 1932:Part 2 Loop Strength of Yarn and Thread [Xhd]	Tensile
BS	BS25-43B	BS 2543;1995 Upholstery Seam Slippage	Seam
BS	BS30-84K	BS 3084:2006 Slide Fasteners Annex B Strength of Puller attachment	Tensile
BS	BS30-84L	BS 3084:2006 Slide Fasteners Annex C Strength of Closed-end	Tensile
BS	BS30-84M	BS 3084:2006 Slide Fasteners Annex D Strength of Top-stop	Tensile
BS	BS30-84N	BS 3084:2006 Slide Fasteners Annex E Strength of Open-end fastener box	Tensile
BS	BS30-84P	BS 3084:2006 Slide Fasteners Annex G Lateral strength of fastener	Tensile
BS	BS30-84Q	BS 3084:2006 Slide Fasteners Annex H Lateral strength of open-end attachment	Tensile
BS	BS30-84R	BS 3084:2006 Slide Fasteners Annex I Strength of Slider locking device	Tensile
BS	BS30-84J	BS 3084:2006 Slide Fasteners Annex J Open-End fastener single stringer slider retention	Tensile
BS	BS31-44A	BS 3144 : pt6.4 Tearing Load (F) & Thickness [XHead]	Tear
BS	BS13-144	BS 3144 Measurement of Tearing Load (leather)	Tensile
BS	BS33-203	BS 3320 Slippage Resistance	Seam
BS	BS34-24F	BS 3424 Part 10;1996 Frictional Properties	Tensile

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BS	BS34-24C	BS 3424 Part 4 Method 6 [XHead]	Tensile
BS	BS34-24s	BS 3424 Part 5 Method 7B Tear Strength (single direction)	Tensile
BS	BS34-24A	BS 3424 Part 5;1996 Method 7B Tear Strength	Tear
BS	BS34-24H	BS 3424: Part 5:1996 Method 7C Single Tear	Tear
BS	BS41-162	BS 4162;1983 Button Strength	Tensile
BS	BS46-500	BS 4650 Tensile Strength[XHead]	Tensile
BS	BS46-740	BS 4674 Tensile Tenacity Test [Xhd]	Tensile
BS	BS49-52Q	BS 4952 : 2.4. Extn & Rec. [Variable settings]	Tensile
BS	EXTM-005	BS 4952 METHOD A (W/W)	Cycle
BS	BS49-52A	BS 4952;1992 2.1 & 2.2 Elastic Fabrics Extension & Modulus	Tensile
BS	BS49-52E	BS 4952;1996 2.4 Elastic Fabrics Residual Extension	Cycle
BS	BS51-31M	BS 5131 pt.5.13 : Seam Strength	Seam
BS	BS51-31L	BS 5131 Sec 5.11: Buckle Fastening Assemblies	Tensile
BS	BS51-31D	BS 5131 Sec 5.4: Sole Bond Peel [XHead]	Peel
BS	BS15-229	BS 5229 - Tuft Withdrawal	Tensile
BS	BS72-71B	BS 7271;1990 Touch and close fasteners (B) Peel Strength	Peel
BS	BS72-71C	BS 7271;1990 Touch and close fasteners (C) Shear strength	Shear
BS	BS72-71F	BS 7271;1990 Touch and close fasteners (F) Breaking Strength	Tensile
BS	BS17-399	BS 7399 - Delamination Force	Peel
BS	BS75-05B	BS 7505 :Elastic Properties of Bandages + Added Point [Xhd]	Cycle
BS	BS75-05A	BS 7505;1995 Elastic Properties of Bandages	Cycle
BS	B790-7B1	BS 7907; 2007 Annex B - Removal force of attached components	Tensile
BS	TEAR-ROV	Rover Tear - BS 3424 pt.5 : 7b	Tear
BS	LMOX-ROV	Rover Tensile - BS 3424 : pt.4	Tensile
BS EN	BE290733	BS EN 29073-3;1992 Nonwovens - Tensile and Elongation	Tensile
BS EN	EN86-30A	BS EN 863;1996 Protective clothing - Puncture Resistance	Puncture
BS EN	BS96-41X	BS EN 964-1:1995 Geotextiles - Auto thickness Method B (Single layer)	Comp Hold & Ramp
BS EN	BS96-41A	BS EN 964-1:1995 Geotextiles - thickness Method A (Single layer)	Tensile
BS EN	BS96-41B	BS EN 964-1:1995 Geotextiles - thickness Method B (Single layer)	Comp Hold & Ramp
BS EN ISO	B118-57B	BS EN ISO 11857: 2002 Textile floor coverings - Delamination resistance	Bonding
BS EN ISO	BS13-937	BS EN ISO 13937: pts.2 to 4: Tear Properties of Fabrics	Tear
D	TEAR-PSA	PSA Tear - D44 1126	Tear
DIN	TEAR-BMW	BMW Tear Test - Din 53 859	Tear
DIN	DN53-354	DIN 53 354 - Artificial leather tensile test	Tensile
DIN	DN53-356	DIN 53 356 - Artificial leather tear growth test	Tensile
DIN	D538-35M	DIN 53 835 Part 13-A; 1983 Textile Fabric Elastic behaviour - single cycle to Extn	Cycle
DIN	DN53-857	DIN 53 857 - Tensile Test on Strips of Fabric (Part1)	Tensile
DIN	DN53-858	DIN 53 858 Breaking Strength - Grab Method	Tensile
DIN	DN53-859	DIN 53 859 Tongue Tear Growth [XHead]	Tear
DIN	DN54-310	DIN 54310; 1980 Delamination of fusible interling from upper fabrics	Peel
DuPont	DP03-501	Dupont Test Method 035;2001	Tear
DuPont	DP07-602	Dupont Test Method 076 (May 2000)	Tensile
DuPont	DPLS-001	Dupont Test Method Lycra Soft	Cycle
DuPont	DPTM-011	Dupont TM 011 - Lycra Tensile	Tensile
DuPont	DPTM-V11	Dupont TM 011 - Lycra Tensile [Variable]	Tensile
DuPont	DP76-77A	Dupont TTM 076 Elongation & 077 Growth (Aug 2001)	Tensile
DuPont	DP07-6CK	Dupont TTM 076-CK Circular Knit Fabric Elongation	Cycle
DuPont	DPTM-012	DuPont: TTM 012 Elastic properties of Bare Elastane Yarn	Tensile
EN	1227-7a2	EN 12277; 2007 Mountaineering - Safety Harnesses; Type A (Head-Down)	Creep / Hold Load
EN	1227-7a1	EN 12277; 2007 Mountaineering - Safety Harnesses; Type A (Head-Up)	Creep / Hold Load
EN	1227-7b2	EN 12277; 2007 Mountaineering - Safety Harnesses; Type B (Head-Down)	Creep / Hold Load
EN	1227-7b1	EN 12277; 2007 Mountaineering - Safety Harnesses; Type B (Head-Up)	Creep / Hold Load

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EN	1227-7c2	EN 12277; 2007 Mountaineering - Safety Harnesses; Type C (Belt Test)	Cycle / Hold
EN	1227-7c1	EN 12277; 2007 Mountaineering - Safety Harnesses; Type C (Head-Up)	Cycle / Hold
EN	1227-7d1	EN 12277; 2007 Mountaineering - Safety Harnesses; Type D (Head-Up)	Cycle / Hold
EN	E147-04B	EN 14704-1;2005 Elasticity of Fabrics - Strip Test (Fixed Elongation)	Cycle
EN	E147-04A	EN 14704-1;2005 Elasticity of Fabrics - Strip Test (Fixed Load)	Cycle
EN	E147-04M	EN 14704-2;2007 Elasticity of Fabrics pt2; Multiaxial (Method A)	Cycle / Hold
EN	1470-4B3	EN 14704-3:2006 Elasticity - Narrow fabrics Method B Main	Cycle
EN	1470-4P3	EN 14704-3:2006 Elasticity - Narrow fabrics Method B Preliminary	Tensile
EN	1470-4A3	EN 14704-3;2006 Elasticity - Narrow Fabrics Method A	Cycle / Hold
EN	E155-98a	EN 15598; 2008 Terry fabrics - resistance to pile loop extraction	Tensile
EN	E187-5A3	EN 1875-3; 1997 Tear Strength Part3: Trapezoid	Tear
EN	EN34-41A	EN 344 Determination of compression resistance	Compression
EN	EN34-41C	EN 344 Energy Absorption of seat region	Compression
EN	EN34-41B	EN 344 Nail Penetration[XHead]	Compression
EN	E986-31X	EN 9863-1:2005 Geosynthetics - Auto thickness at pressures Part1: Single layer (Proc B)	Comp Hold & Ramp
EN	E986-31B	EN 9863-1:2005 Geosynthetics - thickness at pressures Part1: Single layer (Proc B)	Compression
EN	EN12-718	prEN 12718 - Stocking Test [XHead]	Tensile
EN ISO	E122-36A	EN ISO 12236:1996 Geotextiles - Static Puncture CBR	Puncture
EN ISO	E139-34G	EN ISO 13934-1; 1999 Tensile & Elongation - Strip Method - corrected gl	Tensile
EN ISO	E139-34A	EN ISO 13934-1;1999 Maximum Force & Elongation - Strip Method	Tensile
EN ISO	E139-34W	EN ISO 13934-1;1999 Maximum Force per Width & Elongation - Strip Method	Tensile
EN ISO	E139-3X1	EN ISO 13934-2:1999 + 13935-2:1999 + 13936-1:2004 Seam Properties	Seam
EN ISO	E139-34B	EN ISO 13934-2;1999 Maximum Force - Grab Method	Tensile
EN ISO	E139-35A	EN ISO 13935-1;1999 Seam Rupture Force - Strip Method	Seam
EN ISO	E139-3N1	EN ISO 13935-2;1999 + 13936-2;2004 Seam Properties - Fixed Load	Seam
EN ISO	E139-3M1	EN ISO 13935-2;1999 + 13936-2;2004 Seam Properties (Modified)-Fixed Load	Seam
EN ISO	E139-35B	EN ISO 13935-2;1999 Seam Rupture Force - Grab Method	Seam
EN ISO	E139-36F	EN ISO 13936-1;2004 Slippage Resistance - Fixed Opening Method	Seam
EN ISO	E139-36G	EN ISO 13936-2;2004 Slippage Resistance - Fixed Load Method	Seam
EN ISO	E139-36C	EN ISO 13936-3; 2007 Fabric Yarn Slippage - Needle clamp method	Seam
EN ISO	E139-37A	EN ISO 13937;2000 pts.2 to 4: Tear Properties of Fabrics	Tear
EN ISO	EN02-062	EN ISO 2062;1995(2009) Yarn from Packages Breaking Force and Elongation	Tensile
EN ISO	ISO2-411	EN ISO 2411;2000 Adhesion of Rubber- or Plastic-Coated Fabrics	Tensile
EN ISO	I337-6A1	EN ISO 3376; 2002 Leather Tensile Strength and Extension	Tensile
EN ISO	I337-2A1	EN ISO 3377-1;2002 Leather Tear Load (Single Edge)	Tear
EN ISO	I337-2A2	EN ISO 3377-2;2002 Leather Tear Load (Double Edge)	Tear
EN ISO	E467-4A1	EN ISO 4674-1;2003 Tear Resistance of Coated Fabrics - methods A & B	Tear
EN ISO	ISO5-079	EN ISO 5079;1996 Textile Fibres Breaking Force and Elongation	Tensile
EN ISO	E907-3A3	EN ISO 9073-3;1997 Nonwovens - Tensile and Elongation	Tensile
EN ISO	E907-3A4	EN ISO 9073-4;1997 Nonwovens - Tear Resistance	Tear
ES	TEAR-MTT	Mits/Toyota H/L Tear - ES-X83270 : 4.7	Tear
Fiat	TEAR-FIT	Fiat Tear - 50 442	Tear
FLTM	SEAM-FRD	Ford Seam - FLTM BN 119-01	Seam
Gap	GAPS-SP1	GAP ASTM D434;1995 ASTM D5034;1995 Resistance to Slippage Seam Strength and Fabric Strength	Tensile
Gap	GAP1-023	Gap TM S1023:2002 Button or Small Parts Attachment Strength	Tensile
Generic	TEAR-012	Coated Fabrics Tear Test (Mid 50% 5 Highest pks)	Tear
Generic	CYCL-005	Compression Load Cycle + 3Ld Targets [XHd]	Cycle
Generic	ITST-004	Compression to 75% I.D. with weight	Compression
Generic	ITST-005	Compression to 95% I.D. without weight	Compression
Generic	CYCX-002	Cycle to Extension Tensile Test [XHead]	Cycle
Generic	CYCX-003	Cycle to Extension Tensile Test [XHead]	Cycle
Generic	DS27-5B1	Decathlon DS-275 B : 2009 Stretch Properties of Knitted Textile	Cycle

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Generic	E123-321	EN 12332-1:1999 Rubber- or Plastic-coated fabric Burst Part 1: Steel Ball	Ball Burst
Generic	SEAM-003	Fabric Slippage at Load	Seam
Generic	KAYM-ACF	Fabric Tensile with Extension Targets	Tensile
Generic	FIBR-001	Fibre Test (Force) [XHead]	Tensile
Generic	FIBR-002	Fibre Test (Stress) [XHead]	Tensile
Generic	KAYM-ACT	Filament Tenacity Test	Tensile
Generic	SLIP-TI2	Gen. Tensile / Seam Slippage [WW]	Seam
Generic	SLIP-TI1	Gen. Tensile / Seam Slippage [XHead]	Seam
Generic	BUTT-AT1	General Security of Attachments Test [XHead]	Tensile
Generic	GRAB-001	Grab Test	Tensile
Generic	GRAB-002	Grab Test + Preload	Tensile
Generic	SEAM-430	Hold Load User Input Seam Slippage	Seam
Generic	SLTE-001	Modified SLT to Extension [Xhd]	Tensile
Generic	PERS-001	PersoZ Compression Test [XHead]	Compression
Generic	MOBL-001	Seam Separation - MobeTest	Seam
Generic	SEAM-007	Seam Slippage and Tensile [W/W]	Seam
Generic	Butt-At2	Security of Attachments - Open method	Tensile
Generic	BUTT-001	Tensile Burton Pull-Off (Force) [XHead]	Tensile
Generic	CTTE-002	Tensile Cycling between Extensions	Cycle
Generic	CTTL-002	Tensile Cycling between Loads	Cycle
Generic	CYCL-004	Tensile Load Cycle + 3Ld Targets [Xhd]	Cycle
Generic	CYCL-003	Tensile Load Cycle + Ld/Ex Targets [Xhd]	Cycle
Generic	CYCL-002	Tensile Load Cycle Test [Xhd]	Cycle
Generic	CYCL-208	Tensile Load Multi-Cycle + 5 Mod-Points (N/mm) [Xhd]	Cycle
Generic	Port-ex1	Tensile Test for Epidural Tubing with Yield_Slope	Tensile
Giamorise	GLAM-14A	Giamorise TM 14:2002 Modulus and Elongation on Stretch Fabric	Cycle
GME	SEAM-G-M	GM Seam - GME 60341	Seam
Honda	TEAR-FHD	Ford and Honda Tear - D 6506 : 5.6	Tear
Honda	PEEL-HND	HES D 6506-00 Fabrics section 5.24 Peeling Strength	Bonding
Honda	Tens3Hnd	HES D 6506-00 Fabrics section 5.4 Knitted Fabric Tensile Strength	Tensile
Honda	Tens2Hnd	HES D 6506-00 Fabrics section 5.4 Woven Fabric Tensile Strength	Tensile
Honda	PERM2HND	HES D 6506-00 Fabrics section 5.5 Knitted Fabric Permanent set	Cycle / Hold
Honda	PERM-HND	HES D 6506-00 Fabrics section 5.5 Woven Fabric Permanent set	Cycle / Hold
Honda	Tear-HND	HES D 6506-00 Fabrics section 5.6 Tear Strength (Trapezoidal)	Tear
Honda	Tens4Hnd	HES D 6511-99A PVC Leathercloth section 4.4 Tensile Strength	Tensile
Honda	Tear2HND	HES D 6511-99A PVC Leathercloth section 4.6 Tear Strength	Tear
Honda	PEEL2HND	HES D 6511-99A PVC Leathercloth section 4.7 Peel Strength	Peel
ISO	IS13C019	ISO 10319; 2008 Geosynthetics Wide-Width Tensile elements from PreLoad	Tensile
ISO	IS13b019	ISO 10319; 2008 Geosynthetics Wide-Width Tensile from PreLoad	Tensile
ISO	IS13-019	ISO 10319; 2008 Geosynthetics Wide-Width Tensile Test	Tensile
ISO	IS10-321	ISO 10321 Tensile Tests For Joints/Seams by wide/Width Method	Seam
ISO	IS13-936	ISO 13936-1: Slippage Resistance - Fixed Opening Method	Seam
ISO	I139-36D	ISO 13936-2: Slippage Resistance - Fixed Load Method	Seam
ISO	IS14-21G	ISO 1421:1998 Tensile Strength and Elongation - Grab method	Tensile
ISO	IS14-21S	ISO 1421:1998 Tensile Strength and Elongation - Strip method	Tensile
ISO	IS14-21W	ISO 1421:1998 Tensile Strength and Elongation F/Wd - Strip method	Tensile
ISO	ISO2-060	ISO 2060 Threads: Textiles - Yarns from Packages	Tensile
ISO	ISO2-062	ISO 2062 - Breaking Force of Yarns	Tensile
ISO	ISO3-341	ISO 3341;2000 Textile Glass - Yarns - Breaking Force and Elongation	Tensile
ISO	IS34-MA2	ISO 34 Method A / BS 903: A3 Trouser tear (2 pks)	Tear
ISO	ISO0-036	ISO 36 (BS 903 Pt.A12) Adhesive Strength to Textiles	Peel
ISO	IS46-74A	ISO 4674 : (A1/A2) Tear Resistance of Coated Fabrics	Tear

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ISO	ISO4-919	ISO 4919 - Tuft Withdrawal	Tensile
ISO	ISO5-079	ISO 5079 - Breaking Strength of Fibres	Tensile
ISO	ISO6-133	ISO 6133 Adhesion Strength	Tear
ISO	ISO6-939	ISO 6939: Yarns from Packages (Skein)	Tensile
ISO	ISO90-73C	ISO 9073-3;1989 Nonwovens - Tensile and Elongation	Tensile
ISO	ISO90-73D	ISO 9073-4;1989 Nonwovens - Tear Resistance	Tear
ITS	ITGS-002	ITS Garment Seams	Seam
IUF	IUF_-470	IUF-470:1997 Adhesion of Finish - 90 Deg.Peel [XHead]	Tensile
IUP	IUP6-001	IUP 6. Tensile Test [XHead]	Tensile
IUP	IUP8-001	IUP 8. Tear Test [XHead]	Tear
IUP	IUP9-01A	IUP 9. Ball Burst - Automatic [XHead]	Compression
IUP	IUP9-01B	IUP 9. Ball Burst - User Input [XHead]	Compression
IUP	IUP9-01C	IUP 9. Ball Burst + Mod.Point - Automatic [XHead]	Compression
IUP	IUP9-01D	IUP 9. Ball Burst + Mod.Point - User Input [XHead]	Compression
IWS	W117-001	IWS TM 117 - Seam Slippage	Seam
IWS	W128-001	IWS TM 128 - Dimensional Stability	Tensile
IWS	W172-002	IWS TM 172 - Tear (Mean 5 Highest Pks)	Tear
IWS	W172-001	IWS TM 172 - Tear Strength	Tear
IWS	W179-01b	IWS TM 179 - Stretch Test with Res.Ext	Tensile
IWS	W179-01c	IWS TM 179 (1997) - Stretch Test with Res.Ext	Tensile
IWS	W202-001	IWS TM 202 - Tuft Withdrawal	Tensile
IWS	W264-002	IWS TM 264 - Bond (Mean 5 Highest Pks)	Peel
IWS	W264-001	IWS TM 264 - Bond Strength	Peel
JIS L	JS10-18B	JIS L 1018-1990 Knitted Fabrics; 6.13 Tensile and Elongation - Cut strip	Tensile
JIS L	JS10-18A	JIS L 1018-1990 Knitted Fabrics; 6.13 Tensile and Elongation - Grab	Tensile
JIS L	JS10-18D	JIS L 1018-1990 Knitted Fabrics; 6.14.1 Elongation force after time - Cut strip	Tensile
JIS L	JS10-18C	JIS L 1018-1990 Knitted Fabrics; 6.14.1 Elongation force after time - Grab	Tensile
Kobusch	KOB5-733	Kobusch Trapezoidal Tear based on ASTM D 5733:1995	Tear
LTD	LTD A-003	LTD 03;2004 Stretch Fabrics - Power and Recovery	Tensile
LTD	LTD A-006	LTD 06;2004 Elastics Load - Elongation and Recovery	Tensile
LTD	LTD0-701	LTD 07 Bra Band Elongation	Tensile
LTD	LTD1-001	LTD 10 Comfort Value Load and Elongation	Tensile
LTD	LTD1-101	LTD 11 Garment Form Load and Elongation	Tensile
LTD	LTD1-901	LTD 19;2005 Elongation of Seamless Tubes and Garments	Tensile
LTD	LTD2-305	LTD 23;2005 Wire Casing - Pin Penetration	Tensile
LTD	LTD2-401	LTD 24 Seam Stretchability of Knitted Garments	Seam
LTD	LT27-24A	The Ltd - ASTM D 2724 - 03 Bond Strength of Bonded and Fused Fabrics	Bonding
LTD	LT27-24B	The Ltd - ASTM D 2724 - 03 Bond Strength of Laminated Fabrics	Bonding
M&S	MS11-002	M&S P11;2001 Tensile Strength	Seam
M&S	MS11-5B4	M&S P115: 2006 Security of Attachment (Handbags and Belts)- 20 kgf	Tensile
M&S	MS11-5A4	M&S P115: 2006 Security of Attachment of Accessories to Garments - 10kgf	Tensile
M&S	MS11-5C5	M&S P115A: 2006 Security of Attachment of Poppers to Garments - 10kgf	Tensile
M&S	MS11-5D5	M&S P115B: 2006 Test to Failure Security of Attachment of Accessories to Garments	Tensile
M&S	MS11-5E5	M&S P115C: 2006 Test to Failure Security of Attachment of Poppers to Garments	Tensile
M&S	MS11-A02	M&S P11A;2004 Tensile Strength - Bra Wire Casing	Tensile
M&S	MS11-B01	M&S P11B;2001 Tensile Strength - Plastic Rings and Sliders	Tensile
M&S	MS12-005	M&S P12;2004 Fabric Slippage	Seam
M&S	MS12-202	M&S P122;2001 Strength of Buttons	Tensile
M&S	MS12-402	M&S P124;2001 Fabric Covered Button Security	Tensile
M&S	MS12-A01	M&S P12A;2004 Fabric Slippage of Stretch Fabrics (Fixed Load)	Seam
M&S	MS12-B02	M&S P12B;2004 Garment Seam Slippage and Seam Strength (Fixed Load)	Seam
M&S	MS13-004	M&S P13;2004 Peel Bond Strength	Tensile

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M&S	MS13-A02	M&S P13A;2004 Peel Bond Strength for Handbag and Belt Fabrics	Tensile
M&S	MS14-002	M&S P14;2004 Extension & Modulus	Tensile
M&S	MS14-102	M&S P141;2003 Single Stringer Top Stop	Tensile
M&S	MS14-A02	M&S P14A;2004 Ext. & Modulus - Stretch Laces	Tensile
M&S	MS14-B01	M&S P14B;2001 Elastic Properties - Lycra Soft	Tensile
M&S	MS14-C02	M&S P14C;2001 Ext. & Mod. - Bare Rubber Tapes	Tensile
M&S	MS15-PT1	M&S P15 part 1;2004 Ext. & Res. Ext. of Stretch Woven Fabrics	Tensile
M&S	MS15-A02	M&S P15A;2003 Ext. Mod & Res. Ext. of Stretch Fabrics -Weft Knits	Tensile
M&S	MS15-B02	M&S P15B;2001 Knee Bagging	Tensile
M&S	MS35-003	M&S P35;2001 Baumann Tear Strength	Tensile
M&S	MS42-003	M&S P42;2004 Single Tear Strength	Tensile
M&S	MS43-002	M&S P43;2004 Breaking Load & Extension of Woven and Coated Fabrics	Tensile
M&S	MS70-001	M&S P70;2001 Strength Testing of Sewing Threads (EN ISO 2062;1995)	Tensile
M&S	MS98-003	M&S P98;1989 Tear Strength Wing Rip	Tensile
MFTM	MFTM-601	MFTM 6;2004 Maidenform Test Method	Tensile
MTL	MTLS-105	MTL 5-1005 Stretch Fabrics Load, Elongation and Recovery Auto Method	Any
NEXT	NEXT6016	NEXT Method 16; 2006 Grab Strength and Seam Slippage of Woven Fabrics	Seam
NEXT	NEXT616A	NEXT Method 16a; 2006 Seam Slippage of Garment Production Seams	Seam
NEXT	NEXT6021	NEXT Method 21; 2009 Extension and Modulus	Tensile
NEXT	NEXT621A	NEXT Method 21a; 2006 Extension and Recovery	Cycle
NEXT	NEXT6025	NEXT Method 25; 2006 Resistance to Tearing Wing Rip	Tear
NEXT	NEXT-027	NEXT Method 27; 2006 Breaking Strength and Elongation (Ravelled Strip)	Tensile
NEXT	NEXT6036	NEXT Method 36; 2006 Bra Wire Casing	Tensile
NEXT	NEXT-037	NEXT Method 37; 2006 Button Strength	Tensile
NEXT	NEXT-042	NEXT Method 42; 2006 Attachment strength of Components and Embellishments	Tensile
NEXT	NEXT6045	NEXT Method 45; 2006 Handle Attachment Strength	Tensile
NEXT	NEXT6046	NEXT Method 46; 2006 Strength of Belt Buckles	Tensile
NFG	NFG3-102	NF G 30-102B Medical Hosiery	Cycle
NFG	NF37-103	NF37-103 - Conventional Resistance and Stretch at Break	Tensile
NFG	NF37-130	NF37-130 - Tear Strength Using Trapezoidal Test Pieces	Tensile
NFG	CY30-102	NFG 30-102B Hosiery Test	Tensile
Nike	NIKF-A03	Nike FA03 Small Parts Test Protocol for Childrens Products	Tensile Hold & Ramp
Nike	NIK1-683	Nike: 2006 - ASTM D 1683;2004 Failure in Sewn Seam of Woven Apparel	Seam
Nike	NIK5-034	Nike: 2006 - ASTM D 5034;2001 Breaking Force & Elongation - Grab Test	Tensile
Nike	NIKS-S01	Nike: 2006 - ASTM D434;1995 ASTM D5034;1995 Resistance to Slippage Seam Strength and Fabric Strength	Seam
Nissan	SEAM-NIS	Nissan Seam Strength - M 154/15	Seam
Nissan	TEAR-NIS	Nissan Tear - M 0154/14	Tear
Nottingham	NTG0-002	IHTM Nottingham Textile Group Stretch and Recovery v2;2004	Tensile
NZWB	NZTM-030	NZWB TM30 Integrity of Heat-cut Edges [XHead]	Tensile
NZWB	NZTM-410	NZWB TM410 (including TM 412) [XHead]	Tensile
NZWB	NZTM-411	NZWB TM411 Handling Resistance [XHead]	Tensile
prEN	PREN-125	prEN 12568 Penetration Resistance	Compression
RES.	RES3-0_3	Rover RES.30.A.D.903 - Adhesion of Rubber/Fabric	Peel
RMQT	RMQT-045	RMQT-045: 2003 Core Run Back of Narrow Elastics	Cycle
RMQT	RMQT-035	RMQT-01:020-035:01 Dec 2005 Stretchability of Fabrics and Ribbons	Cycle
RS	NEU0-001	RS-Tarpaulin;1993 8.2 Tear Strength	Tear
RSG	RSG1-001	RSG Method 1;2002 Tensile Strength Grab Method	Tensile
RSG	RSG0-101	RSG Method 10;2002 Garment Seams - Fixed Opening (Investigate Only)	Tensile
RSG	RSG2-001	RSG Method 2;2001 Seaming Properties	Tensile
RSG	RSG3-001	RSG Method 3;2001 Stretch Woven Seam Properties	Tensile
RSG	RSG4-001	RSG Method 4;2002 Extension Modulus	Tensile
RSG	RSG5-001	RSG Method 5;2002 Residual Extension(Knits)	Tensile

## QMAT Textile Test Methods And Procedures

RSG	RSG6-002	RSG Method 6;2002 Stretch Woven Extension and Residual	Tensile
RSG	RSG6-001	RSG Method 6;2001 Stretch Woven/Extension	Tensile
RSG	RSG7-001	RSG Method 7;2002 Wing Rip	Tensile
RSG	RSG8-001	RSG Method 8;2002 Tear Strength For Leather	Tensile
RSG	RSG9-001	RSG Method 9;2002 Stretch Properties Knit & Wovens	Tensile
Sarah Lee	SARA-002	Sarah Lee Stretch Test	Tensile
Sarah Lee	SARA-001	Sarah Lee Stretch Test W/W	Tensile
SIS	S251-231	SIS 25 12 31 Tear Strength	Tear
SLIATM	SL14-001	SLIATM 14;2000 Sara Lee Intimate Apparel Test Method	Cycle
SLIATM	SL14-A01	SLIATM 14A;2000 Sara Lee Intimate Test Method	Cycle
STD	TEAR-SAB	Saab Tear - STD 1075	Tear
STR	STRF-B01	STR In-House Method Stretch Fabric Bonded-Seam Strength	Tensile
STR	STRF-B02	STR In-House Method Stretch Fabric Bonded-Seam Strength (w/w)	Tensile
Studio Albonico	STAB-001	Studio Albonico - Seam Test	Seam
TOIM	TOIM-01A	TO IHM 01: 2006 Attachment strength of Components	Tensile
TOIM	TOIM-05A	TO IHM 05:2005 Bra Wire Puncture Resistance	Puncture
TSL	SEAM-TOY	Toyota Seam - TSL 21009 : 4.16	Seam
TSL	TENK-TOY	Toyota Tensile Knitted - TSL 21009 : 4.7	Tensile
W.o.Nz	Z117-001	W.o.Nz TM 117 - Seam Slippage	Seam
TSL	TENW-TOY	Toyota Tensile Woven - TSL 21009 : 4.7	Tensile
W.o.Nz	Z117-001	W.o.Nz TM 117 - Seam Slippage	Seam
W.o.Nz	Z128-001	W.o.Nz TM 128 - Dimensional Stability	Tensile
W.o.Nz	Z202-001	W.o.Nz TM 202 - Tuft Withdrawal	Tensile
W.o.Nz	Z264-001	W.o.Nz TM 264 - Bond Strength	Peel
W.o.Nz	Z004-001	W.o.Nz TM 4 - Breaking Load + Ext	Tensile
Woolmark	WMTM-117	Woolmark TM 117;2002 Seam Slippage (Woven fabrics)	Seam
Woolmark	W179-AB2	Woolmark TM 179:Oct 2001 -pts A&B Knitted Stretch and Growth	Tensile
Woolmark	W179-AB1	Woolmark TM 179:Oct 2001 -pts A&B Wovens Stretch and Growth	Tensile
	GCOM-E2a	GC 0M:E2-2008 Liveliness of Elastic Knits - Laces and Embroideries	Cycle
	VAR0-15J	Method 15J - Variable Dwell	Tensile

# UTM — QUOTATION REQUEST Questionnaire

PHOTOCOPY  
& FAX BACK  
TO SDL Atlas

Customer .....

Contact .....

Address .....

Telephone .....

.....

Fax .....

.....

E-mail .....

PRODUCTS TO BE TESTED

PRODUCT SIZES (min/max)

Single Fibres     Yarns     Cords/Ropes

Diameters (Denier) .....

Fabrics     Tape/Webbing     Laminates

Diameters (Count) .....

Cords/Ropes     Tape/Webbing     Laminates

Diameters (mm/inch) .....

Others (describe) .....

Test Widths (mm/inch) .....

.....

Widths (mm/inch) .....

.....

Test Widths (mm/inch) .....

TEST PARAMETERS (min/max) .....

TYPE OF TEST

Expected loads .....

Load at break

Units (grams, kg, pounds, N, KN) .....

Extension %

Preload (if required) .....

Tear strength

Extension (%) .....

Seam slippage

Test length or gauge length .....

Load at specific extension %

(mm/inch, nip point to nip point)

Extension % at specific load

Test speed (mm/min or inch/min) .....

Load at ball burst

Extension (mm/inch) at ball burst

Delamination strength

INTERNATIONAL TEST METHODS USED

Standard ..... Number ..... Year .....

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.

