

**NILIT® TOUGHTEX Fabric Brand
Certification Requirements**

NILIT® is a global leader in polyamide 6.6 production and we are focused on delivering high quality products and innovation to our customers around the world. **NILIT® TOUGHTEX** fabric provides durability, versatility and reliability with high tear and abrasion resistance. **NILIT® TOUGHTEX** fabric is suitable for activewear, outerwear apparel, denim, shoes, bags, socks and technical fabrics. **NILIT® TOUGHTEX** fabrics are designed for living and built to last providing exceptional resistance to tears, scuffs and abrasions. Apparel can be made in a variety of weights and constructions, from lightweight fabrics to heavier fabrics, for multiple enduses.

We have a wide range of performance fibers under the **NILIT® TOUGHTEX** brand name, check out our website <http://www.nilit.com/fibers/brands.asp> or call one of the contacts detailed at the bottom of this page.

Using the **NILIT® TOUGHTEX** brand could not be easier, just follow the 3 easy steps: -

1. Fabrics developed with **NILIT® TOUGHTEX** products should be submitted for testing using the form on the back of this document to our certification test laboratory.
2. We will confirm in writing the results of the certification testing, and if the fabric meets the Brand Certification Requirements detailed below, a unique reference number will be provided with the approval certificate.
3. The fabric mill can then identify their fabric samples as **NILIT® TOUGHTEX** and garment manufacturers can request hangtags by quoting the unique fabric approval reference number. Applications for hangtags by garment makers can be made directly on our Internet site <http://www.nilit.com/hangtags>

The following certification standards apply to all fabrics and garments that use the **NILIT® TOUGHTEX** brand. This permission must be requested for all new articles produced before the **NILIT® TOUGHTEX** brand is used.

Quality Standards: Garment manufacturers are responsible for garment quality and together with the fabric producers, for ensuring that fabrics are suitable for their intended end use. NILIT reserves the right to withdraw the **NILIT® TOUGHTEX** fabric brand from any fabric or garment that is of inferior quality. **NILIT® TOUGHTEX** fabric quality standards vary by fabric type and intended end use, and are detailed below in a series of tables.

Table 1 gives the **NILIT® TOUGHTEX** fabric performance standards for woven fabrics (excluding motorcycle).

WOVEN FABRICS	OUTERWEAR	WORKWEAR	READY TO WEAR	DENIM	SHOES	BAGS & ACCESSORIES	TECHNICAL TEXTILES	MILITARY/ HOMELAND SECURITY
NILIT® TOUGHTEX Qualifying Yarns – in Warp	Any count	Any count	Any count	Min. 180 Dtex AJT				
NILIT® TOUGHTEX Qualifying Yarns – in Weft			Any count	Min. 180 Dtex AJT				
Qualifying Yarn Content	50%	50%	50%	50%				
Staple yarns allowed?								
Abrasion. (modified Martindale)								
Grab Strength	---	---						
Pilling Rating	---	---						

Table 2 gives the construction recommendations for woven **NILIT® TOUGHTEX** fabric in terms of the min. ends and picks.

DECITEX	MINIMUM WARP ENDS/CM	MINIMUM WEFT PICKS/CM
Up to 90	50	36
Up to 180	38	24
Up to 370	24	15
Up to 560	19	13.5
Up to 370/2	16	13
Up to 560/2	13	10.5

Table 3 gives the performance standards for **NILIT® TOUGHTEX** fabric in circular knit and flat bed fabrics.

KNIT FABRICS	
Qualifying Yarns	All TOUGHTEX® qualifying yarns
% Content Qualifying Yarns	minimum 50% total fabric content
Staple Yarns Allowed	Yes
Abrasion (Modified Martindale)	300 cycles
Snagging Rating	4-5

NILIT® TOUGHTEX fabric branding requirements for socks are detailed in a separate document

Table 4 gives the performance standards for motorcycle suits and reinforcements

Motor Cycle Suits & Reinforcements	
Qualifying Yarns - warp	Minimum 560 decitex
Qualifying Yarns - weft	Minimum 560 decitex
Qualifying Yarns Content	100%
Staple yarns allowed	No
Construction	Must be coated
Coated Fabrics	
Abrasion (Modified Wyzenbeek)	1,000 cycles
Grab Strength	1600 N
Tear Strength	90 N
Lightly Coated Reinforcements	
Abrasion (Modified Wyzenbeek)	700 cycles
Grab Strength	1600 N
Tear Strength	90 N

Performance Tests

Abrasion: Modified Martindale (BS EN 530)

Fabrics are mounted on an abrasion machine that rubs multi-directionally for the prescribed number of cycles, or until two threads in either warp or weft have been worn away. The abradant material is P800 silicon carbide, with no weight on the test sample.

Abrasion: Modified Wyzenbeek (TM 1507-90)

Required only for motorcycle-wear. Fabrics are mounted on an abrasion machine that rubs in the warp and weft direction for the prescribed number of cycles, or until both a warp thread and a weft thread have been worn away.

Pilling (BS EN ISO 12945-1)

For fabrics containing staple yarns. Fabric samples are wrapped around a tube and then placed in a cork lined box where they are tumbled for 10 hours. The samples are then assessed against standard photographs that illustrate pilling ratings. A rating of 5 is excellent and a rating of 1 is poor.

Snagging (TCWM445)

Required for all knit fabrics. Fabric samples are fitted around a tube and rotated while a spiked mace continually plucks the fabric. Snagging performance is assessed after 300 revolutions. A rating of 5 is excellent and a rating of 1 is poor.

Grab Strength (ASTM D5034)

Fabric samples are mounted in a tensile testing machine and extended until they break.

Tear Strength (ISO 4674-1: Trousers Tear Method)

This test measures the force required to tear a fabric sample along a pre-made cut. The average peak load (in Newtons) between two set points is reported

Terms and Conditions

- Garment manufacturers are responsible for garment quality and for ensuring, along with the fabric producer, that the fabric is suitable for the intended end use.
- The written approval from Nilit to use the **NILIT® TOUGHTEX** fabric brand on any specific certified fabric style is valid for 3 years. After this period, permission to use the brand would need to be requested again and new samples submitted for testing.
- NILIT may refuse the use of the **NILIT® TOUGHTEX** fabric brand for low quality fabrics and garments.
- Hangtags, stickers and all other forms of **NILIT® TOUGHTEX**_logo usage can be requested via our Internet site or from the contacts below. Details of the legal requirements of trademark usage are given on this Internet site. Unauthorized usage of the **NILIT® TOUGHTEX** fabric trademark is subject to prosecution.

Disclaimer

This Brand Requirement Certification document contains only selected data and further information on our Internet site should be carefully read. Customers using NILIT products are responsible for ensuring that it is suitable for the intended end use. Full information via www.nilit.com.

Contacts

Headquarters: NILIT Ltd. Maurizio Levi Rd. Ramat Gabriel, P.O.Box 276, Migdal Haemek, 2310201

ISRAEL. Tel: + 972-4-654-4422 Fax: + 972-4-654449

Marketing: Amy Holzer e-mail: amyh@nilit.com

Branding Lab: Ilan Ben Akiva e-mail: ilanb@nilit.com

Hangtags: Sigalit Nachmani e-mail: sigaltn@nilit.com

NILIT® TOUGHTEX Fabric Branding Submission Form

This brand submission form must be **completed and signed** and sent, along with the required fabric samples to the address below. If the fabric meets the required certification standard, an approval certificate with a unique fabric reference number will be sent to you.

Suggestion: Fill in this PDF form on your computer, print and save for future reference.

Fabric Supplier Details

<p>Fabric Manufacturer Details:</p> <p>Manufacturer's Name _____</p> <p>Address _____</p> <p>_____</p> <p>Country _____</p> <p>Contact Name _____</p> <p>Telephone _____</p> <p>E-mail _____</p>	<p>Company name (if not the fabric manufacturer)</p> <p>_____</p> <p>Address _____</p> <p>_____</p> <p>Country _____</p> <p>Contact Name _____</p> <p>Telephone _____</p> <p>E-mail _____</p>
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Fabric Details

Your fabric reference name/quality number _____

Is this the first time this fabric has been submitted for branding? Yes No

Fabric type (please tick): Circular Knit Seamless Woven Warp Knit Flat Knit

Ends/centimetre Warp (wales) _____ Weft (Courses) _____

Amount of coating _____ gm/sq.m Finished fabric width _____ cms

Greige fabric weight _____ gms/sq.m Finished fabric weight _____ gms/sq.m

Yarn Details

Each Yarn in the fabric	Yarn Details:	NILIT® TOUGHTEX Yarn
NILIT® TOUGHTEX fabric Brand Qualifier 1		
NILIT® TOUGHTEX fabric Brand Qualifier 2		
Other yarn 1		
Other yarn 2		
Other yarn 3		

NILIT® TOUGHTEX Enduse (please mark)

- | | | |
|---------------|---|--------------------------|
| Outerwear | <input type="checkbox"/> Military/Homeland Security | <input type="checkbox"/> |
| Workwear | <input type="checkbox"/> Technical textiles | <input type="checkbox"/> |
| Ready to Wear | <input type="checkbox"/> Motorcycles suits & reinforcements | <input type="checkbox"/> |
| Denim | <input type="checkbox"/> Knit fabrics | <input type="checkbox"/> |
| Shoes | <input type="checkbox"/> Bags and Accessories | <input type="checkbox"/> |

Your signature _____ **Date** _____

Your signature is essential and by signing the request for brand certification, the signatory is legally bound by the Terms & Conditions of the **NILIT® TOUGHTEX** fabric branding scheme (further details on the NILIT Internet site www.nilit.com/hangtags).

Send this completed form together with two sock samples or with two meters of full width, finished fabric and half a meter of uncoated fabric to :-

**NILIT Branding Centre,
NILIT Ltd., Maurizio Levi Rd., Ramat Gabriel, Migdal Haemek, 2310201 ISRAEL**

Contact:
Mr. Ilan Ben Akiva, tel. 972-4-6544450 fax 972-4-6544449 e-mail ilanb@nilit.com