



November 25, 2011

Toyobo Co., Ltd.

Toyobo's High-Strength, Ultra-Light SILFINEYELL® Nylon Fabric Adopted for Use in Mountain Hardware Brand Down Jackets

Toyobo's high-strength, ultra-light SILFINEYELL® nylon fabric has been selected for use in Mountain Hardware* down jackets, and marketing began during the autumn/winter season of 2011.

*Mountain Headwear is a core brand of Mountain Hardware Inc. based in Richmond, California.)



Brand name: Phantom Jacket
Weight: 450 grams (large size)
Materials:
Body: 100% nylon
Insulation: 800 fill goose down
Marketing launch: Autumn/winter season of 2011

This is a medium-loft down jacket for climbing during snow season that offers ample heat retention properties. It is well-suited for use during time spent in snow country and periods of rest as well as during belay periods. The box space around the waist area is compact to prevent uneven shifting of the down, and the jacket is also attractive because of the soft comfort provided by the quality feel of its 800 fill power down.

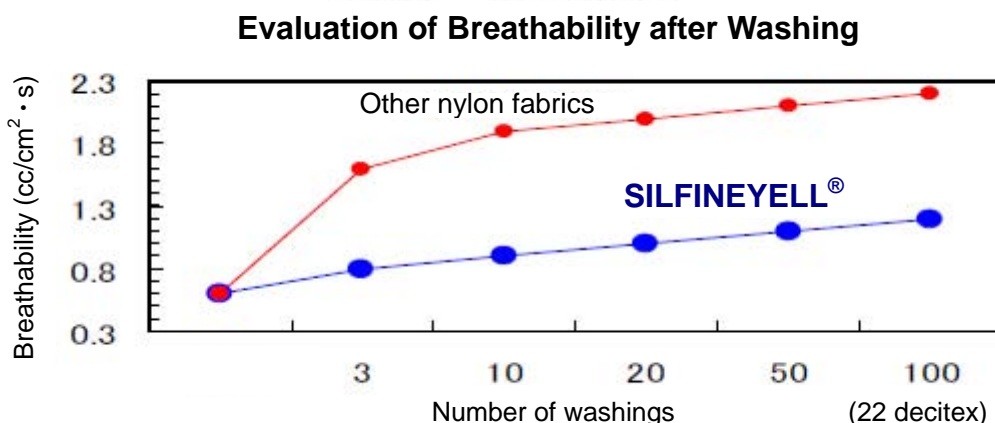
1. Features of the High-Strength, Ultra-Light SILFINEYELL® Nylon Fabric (for Down Jacket Use)

(1) The lightweight, thin fabric is compact while also offering highly durable breathability and tear resistance.

- The fabric is a high-density material that uses yarn with a Y-shaped cross section having a variant grade of 3.0*, which succeeds in making the fabric light, compact, and highly tear resistant while also offering highly durable breathability.
- Previous materials used for the outer fabric of light, thin down jackets tended to lose their breathability after repeated washing and storage.
- SILFINEYELL[®], because of its overlapping Y-shaped fibers, has a structure that makes it difficult for the fibers to change position when made into textiles, and this performs the function of preventing the down from escaping. In addition, SILFINEYELL[®] offers the functions necessary for outdoor apparel, and, even when washed consecutively for 100 times (using the JIS1096 F1 method), it maintains durable breathability.
- In addition, tests conducted by IDFL**, the U.S. public-sector organization, have confirmed that SILFINEYELL[®] retains its down-proof properties even after many washings.
- Even with a high variant grade yarn, SILFINEYELL[®] fabric is a next-generation outer material that combines high tear strength and light weight.

*The long span of the monofilament cross section (the radius of the longest portion) divided by the short span of the monofilament cross section (the radius of the shortest portion)

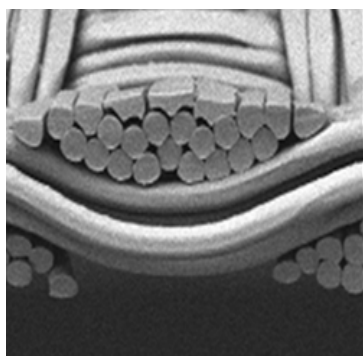
**IDFL stands for International Down and Feather Laboratory and Institute.



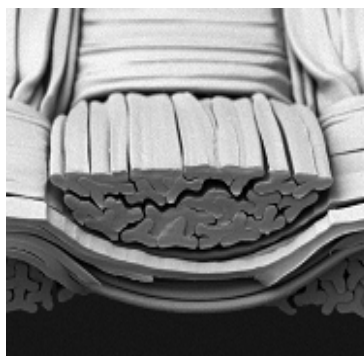
(2) Extreme variance Y-shaped cross section, high-strength multi- nylon-filament spinning technology

The original yarn in SILFINEYELL[®] that is utilized in lightweight fabrics makes use of a nylon resin material made with special polymerization technologies, and,

as a result of a new yarn extrusion nozzle design, the yarn has excellent properties. In addition, spinning technology that results in superior evenness of dyeing has been developed.



Nylon fabrics in general use
(33 decitex)



One example of a row of
SILFINEYELL[®] fabric (33 decitex)

2. Future Development

The outdoor wear industry has shifted toward lighter-weight products since the year 2000, and, in recent years, this trend has become even more pronounced. In 2006, Toyobo Specialties Trading Co., Ltd. (TSTC), won the “2006 ISPO VOLVO Sports Design Award” for down jackets that made use of SILFINE[®]-N and were adopted for Patagonia’s women’s down sweaters. In 2009 and 2010, TSTC also received the “2009 Outdoor Industry Award” and the “2010 Outside Gear of the Year Award” for Marmot rainwear. In addition, Mountain Hardwear windbreakers received the “GOLD Award” at the Outdoor Retailer Show in August 2011.

This time, apparel items made with extreme variance Y-shaped cross section SILFINEYELL[®] were added to the lineup of products. Going forward, TSTC will continue to make use of high-functional materials, proceed with the development of their new uses, and aggressively expand its sales.

For more information, contact:
The Toyobo Public Relations Group
pr_g@toyobo.jp