April 25, 2012

Toyobo Co., Ltd.

Hybridge Lite Jacket Made with Toyobo's High-Strength, Ultra-Light Silfine®-N Nylon Fabric Wins the "2012 Outside GEAR OF THE YEAR Award

Toyobo's high-strength, ultra-light Silfine®-N nylon fabric was selected as the material for the Hybridge Lite Jacket manufactured by CANADA GOOSE, a leading Canadian outdoor apparel company, for the fall and winter season of 2012. This jacket was chosen by the well-known U.S. outdoor wear magazine *Outside* to receive that publication's "2012 Outside GEAR OF THE YEAR" award.

1. The 2012 Outside GEAR OF THE YEAR Award

The reasons given for presenting the award to the Hybridge Lite Jacket were both the functionality of this light, compact, and highly tear-resistant material and its attractive design that makes use of the unique transparent feel of Silfine®-N.

The "2012 Outside GEAR OF THE YEAR" awards are presented after screening several thousand products in various divisions, including tents and sleeping bags, backpacks, jackets, mountain bikes, and sunglasses. After screening, the best gear in each division is selected. In 2012, Hybridge Lite Jacket won one of the top awards in the five categories in the outdoor wear division.

2. Features of the High-Strength, Ultra-Light Silfine®-N Used in the Hybridge Lite Jacket

(1) Lighter and More Compact (60% Reduction Compared with Previous Fabrics)

Fabrics that are made of previously available 56 decitex fibers are generally heavy, with a rated density of more than 60g/m^2. They are, therefore, not sufficiently compact and, because of the thickness of the fabric, it is difficult to give them a transparent feeling.

Silfine®-N is woven from 11 decitex fibers and is both light (with a rated density of 26g/m^2, which is 60% lower in weight than previous fabrics) and compact (with a thickness of 40 μ m which is 60% thinner than previous fabrics).

(2) Highly Tear-Resistant

Silfine®-N is highly tear resistant (able to withstand forces of 10N (Newton) in both the warp and weft directions).

(3) Use of Advanced Manufacturing Technology from Raw Materials to Processing

- Spinning technology minimizes variation in filament strength.

The yarn used in the production of Silfine®-N textiles is made of nylon resin materials that are manufactured with special polymerization technologies. Also, the molecular chains are made uniform during the spinning process to minimize variations in strength among filaments.

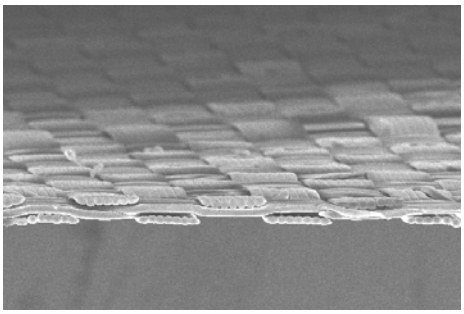
- Yarn production technologies restrain deterioration in strength during the weaving process.

When yarns are spun fine and large numbers of individual fibers are used, it is possible to weave high-density, high-multi-nylon fabric, but this results in the generation of fluff and a tendency toward variations in strength during the weaving process. To restrain the generation of fluff due to twisting of the warp at the time of weaving, Toyobo has newly developed a process that applies glue to the warp yarns. In addition, since the yarn may suffer damage if an ultra-fine weft is thrown under steady pressure, improvements have been made in the

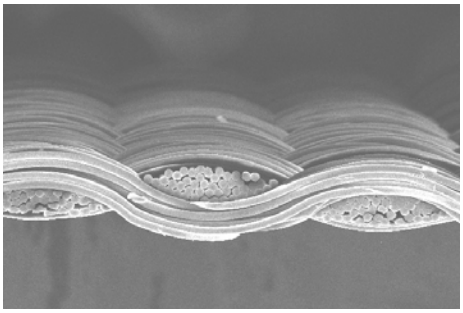
weaving process.

- Processing technology ensures low air permeability.

In the dyeing process, using a processing method that presses the fabric to a thickness of 40 μ m while keeping the multi-filaments uniform, it is possible to manufacture fabrics that have low air permeability and high tear resistance without using a coating process.



Silfine®-N high-strength, ultra-light nylon fabric



Conventional nylon fabric

3. 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. Looking ahead, Toyobo Specialties Trading Co., Ltd. (TSTC) will continue to make use of high-functional materials, proceed with the development of new uses, and aggressively expand sales.

Supplementary Information

Other awards received by products using Silfine®-N:

- 2006: "2006 ISPO VOLVO Sports Design Award" (for Patagonia down sweaters)
- 2009: "2009 Outdoor Industry Award" (for Marmot rainwear)
- 2010: "2010 Outside GEAR OF THE YEAR" (for Marmot rainwear)
- 2011: Gold Award at "Outdoor Retailer Trade Show" (for Mountain Hardwear)

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