# feels comfortable naturally



TENCEL<sup>™</sup> Home Interiors



Feels so right

**TENCEL™** Home cellulose fibers bring the gentle essence of nature into your home.

- **4 TENCEL<sup>™</sup>** Home introduction
- 6 botanic origin
- 7 sustainable production
- 8 key benefits
- **11** contact information



## TENCEL<sup>™</sup> branded lyocell fibers help to maintain the environmental balance by being integrated into nature's cycle:

- The fibers are derived from the renewable raw material wood.
- The certified biobased fibers are manufactured in an environmentally responsible production process.
- The fibers are certified as compostable and biodegradable and thus can fully revert back to nature.

#### **TENCEL<sup>™</sup> Lyocell fibers**

Naturally soft to the touch, TENCEL<sup>™</sup> Lyocell fibers keep your living spaces pleasantly comfortable. Displaying a luxurious sheen and silky surface, TENCEL<sup>™</sup> Lyocell fibers make carpets and upholstery shine radiantly with vibrant colors.

## technologies

#### **REFIBRA™** technology

The pioneering REFIBRA™ technology involves upcycling cotton scraps from garment production, which are transformed into cotton pulp. A substantial proportion - up to one third - of this is added to wood pulp, and the combined raw material is transformed to produce new virgin TENCEL™ Lyocell fibers to make fabrics and textiles.

Based on the same award-winning efficient closed loop production process as standard TENCEL™ Lyocell fiber, REFIBRA™ technology is Lenzing's first step to contribute to the circular economy in the textile industry.

TENCEL<sup>™</sup> fibers with REFIBRA<sup>™</sup> technology are identifiable in yarns, fabrics and final garments owing to the innovative special identification technology designed to confirm fiber origin. In turn, this improves supply chain transparency.

## key benefits











sustainable production





thermal regulation







bacterial growth

unfavorable for

sheen

## botanic origin

**TENCEL™ Lyocell fibers** are derived from sustainable wood sources, harvested from certified and controlled sources following the stringent guidelines of the Lenzing Wood and Pulp Policy. These fibers are available with FSC® (FSC-C041246) or PEFC<sup>™</sup> (PEFC/06-33-92) certification upon request.

Moreover, wood and pulp used by the Lenzing Group comes from sustainably managed forests. TENCEL<sup>™</sup> Lyocell fibers have earned United States Department of Agriculture (USDA) BioPreferred® designation.



USDA Certified Biobased Product





#### impact on environment



#### fiber type

Source: Sustainable Apparel Coalition, 2019

These results were calculated using the Higg Materials Sustainability Index (Higg MSI) tools provided by the Sustainable Apparel Coalition. The Higg MSI tools assess impacts on the environment of materials from cradle-to-gate for a finished material (e.g. to the point at which the materials are ready to be assembled into a product). However, this figure only shows impacts from cradle to fiber production gate.

#### sustainable production

TENCEL<sup>™</sup> Lyocell fibers have gained a reputation for their environmentally responsible, closed loop production process, which transforms wood pulp into cellulosic fibers with high resource efficiency and low ecological impact. This solvent-spinning process recycles process water and reuses the solvent at a recovery rate of more than 99%. This economically viable manufacturing process received the European Award for the Environment from the European Commission in the category "The Technology Award for Sustainable Development" (2002).

All TENCEL<sup>™</sup> Lyocell fiber production sites are certified according to the requirements of the European Ecolabel for textile products, a label of environmental excellence only awarded to products and services which have a significantly lower environmental impact throughout their lifecycle: from raw material extraction, to production, distribution and disposal – an integrated process. Moreover, all TENCEL<sup>™</sup> Lyocell fiber production sites operate according to a certified Environmental Management and Occupational Health and Safety system (ISO14001, OHSAS 18001).



The European Ecolabel (EU Flower)

## biodegradable

Derived from the raw material wood – a product of nature – all TENCEL<sup>™</sup> standard lyocell fiber types have been certified as biodegradable and compostable under industrial, home, soil, fresh water and marine conditions, thus they can fully revert back to nature.



OK biodegradable MARINE



OK compost HOME



OK biodegradable SOIL



Industrial



OK biodegradable WATER



## among the strongest man-made cellulose fibers

TENCEL<sup>™</sup> Lyocell fibers are versatile and distinguished by their high tenacity profile among man-made cellulose fibers. TENCEL<sup>™</sup> Lyocell is tailor-made and available in several linear densities. Whether fine or coarse, it remains strong across a variety of home applications.





**Source:** Lenzing internal testing according to the BISFA methods 2009.

## Sheen

Viewed under an electron microscope, TENCEL<sup>™</sup> Lyocell fibers exhibit a smooth surface, giving interior textiles a refined sheen.

### **Color vibrancy**

The efficient dye uptake and the smooth fiber surface of TENCEL<sup>™</sup> Lyocell fibers make the colors of interior textiles appear brighter and perceptibly more intense than those of wool or cotton fabrics.

## unfavorable for bacterial growth and resistant to pests

Through moisture management, TENCEL<sup>™</sup> Lyocell fibers absorb moisture efficiently, as measured by the Vapor Uptake test and Water Retention Value. In comparison to polyester and synthetics, and even to cotton, there is less available moisture formed on the surface of the fiber for bacteria to grow. Consequently, TENCEL<sup>™</sup> Lyocell fibers provide a less favorable environment for bacterial growth.

Particularly on three of the odor-relevant bacteria types tested (Staphylococcus epidermidis, Pseudomonas aeruginosa, Escherichia coli), a significantly lower growth rate was observed on TENCEL<sup>™</sup> Lyocell compared to cotton and polyester under moderate humidity conditions.

The high moisture absorption ability also generates a less favorable ambience for dust mites compared to cotton, as proven by NF G 39-011, the only normed European test for dust mite growth.

Another essential advantage of TENCEL<sup>™</sup> Lyocell fibers is their resistance to pests, such as moths and carpet beetles. TENCEL <sup>™</sup> Lyocell is naturally moth-free since, while these pests feed on protein-based fibers such as silk and wool, they are not attracted to cellulosic fibers such as lyocell, making the use of pesticide treatments unnecessary. Thanks to this natural resistance, TENCEL<sup>™</sup> Lyocell fibers help to keep your valuable rugs and upholstery intact.







Pseudomonas aeruginosa

Escherichia coli



Source: Hohenstein Institut für Textilinnovation GmbH, Germany Report no. 18.8.6.0007

## gentle on skin

When viewed under an electron microscope, TENCEL<sup>™</sup> Lyocell fibers exhibit a smooth fiber surface, giving interior textiles a pleasant feel and ensuring long lasting comfort.







## minimal static charge

The ability to absorb moisture makes TENCEL<sup>™</sup> Lyocell tension-free with no electrostatic charging. In comparison with synthetics, there is an absence of electrostatic charge under normal atmospheric conditions, preventing the unpleasant effects of static buildup while you are relaxing on your sofa or walking on your rug.

## versatile blending partner

TENCEL<sup>™</sup> Lyocell fibers are versatile and can be combined with a wide range of textile fibers such as cotton, polyester, acrylic, wool, and silk to enhance fabrics in regard to their aesthetics, performance and functionality. This leaves ample room for creativity and offers countless options for unique design.

## contact for further information

#### **HEAD OFFICE**

**Lenzing:** Lenzing Aktiengesellschaft, Werkstraße 2, 4860 Lenzing, Austria Tel: +43 (0) 7672 701 - 0 Fax: +43 7672 701 - 3880 E-mail: fibers@lenzing.com

#### **GLOBAL OFFICES**

India: Lenzing Aktiengesellschaft

Srivari Shrimat, 5th floor (rear side), 1045, Avinashi Road, 641018 Coimbatore, Tamil Nadu, India Tel: +91 (422) 4292 800 Fax: +91 (422) 4292 814 E-mail: india@lenzing.com

#### Hong Kong: Lenzing Fibers (Hong Kong) Ltd.

Units 804-806, 8/F., Lu Plaza, 2 Wing Yip Street, Kwun Tong, Kowloon, Hong Kong Tel: +852 3718 5600 Fax: +852 3718 5601 E-mail: hongkong@lenzing.com

#### Istanbul: Lenzing Elyaf A.Ş.

Akat Mah. Ebulula Mardin Cd. Maya Meridien Plaza, No.16, 34335, Akatlar-Beşiktaş, İstanbul, Turkey Tel: +90 212 349 71 71, Fax: '+90 212 349 71 81, E-mail: turkey@lenzing.com

#### Jakarta: PT. South Pacific Viscose

Sampoerna Strategic Square, South Tower, 22nd Floor, Jl. Jend. Sudirman Kav. 45-46, Jakarta-12930, Indonesia

Tel: +62 (21) 577 1630 Fax: +62 (21) 577 1640 E-mail: jakarta@lenzing.com

#### New York: Lenzing Fibers Inc. 530 Seventh Avenue #808, New York, NY 10018, U.S.A. Tel: +1 212 944 7400 E-mail: newyork@lenzing.com

Seoul: Lenzing Korea Yuhan Hoesa

19th fl. 2, Wiryeseong-daero, Songpa-gu, Seoul, 05544, Korea Tel: +82 2 782 6131 Fax: +82 2 782 6132 E-mail: seoul@lenzing.com

#### Shanghai: Lenzing Fibers (Shanghai) Co. Ltd.

Units 06-08, 15th Floor, Garden Square, No.968 West Beijing Road, 200041 Shanghai, China Tel: +86 (21) 3315 2438 Fax: +86 (21) 6341 0007 E-mail: shanghai@lenzing.com

#### Singapore: Lenzing Singapore PTE Ltd.

51 Bras Basah Road, Manulife Center 02-02/03, Singapore 189554, Singapore Tel: +65 6550 6730

#### www.tencel.com

TENCEL<sup>™</sup> and REFIBRA<sup>™</sup> are trademarks of Lenzing AG

© 2019 Lenzing AG

Media Owner, Publisher and Producer: Lenzing Aktiengesellschaft, Werkstraße 2, A-4860 Lenzing, Austria

Lenzing AG is the sole owner of the Lenzing Trademarks (in particular TENCEL<sup>TM</sup>, LENZING<sup>TM</sup>, ECOVERO<sup>TM</sup>, REFIBRA<sup>TM</sup>) and goodwill associated therewith and has valuable rights in and to the Trademarks. Any information, texts, pictures, drawings, descriptive and visual elements, claims or photographs (including all marketing materials) contained in this Leaflet are protected by copyright and are the sole intellectual property of Lenzing AG, its affiliates or third parties providing the information for the benefit of Lenzing AG.

Despite careful research and diligent in-house and external studies conducted with the utmost of care, Lenzing AG assumes no liability whatsoever for the actuality, correctness and quality as well as preciseness and correctness of the information made available in this Leaflet. This applies in particular to any claims contained in this Leaflet, which refer to Lenzing fibers only. Lenzing AG expressly reserves the right to change, add to or delete individual pieces of information, parts of individual pages and / or the entire Leaflet and to cease publication of the Leaflet either temporarily or finally. Subject to typographical and printing errors.

Nothing herein shall be construed as assigning, transferring or granting any right in or license to use Lenzing Trademarks, Brands, Branded Offer names, Technology names, any copyright protected material or any marketing claims contained in this Leaflet. Any use of Lenzing Trademarks, Brands, Branded Offer names, Technology names or of any copyright protected material or of marketing claims contained in this Brochure require a prior license from Lenzing AG.

For any further information, please visit our homepage www.tencel.com.



Innovative by nature