

**feels comfy,  
naturally**



**TENCEL™ for Footwear**



Feels so right





**feels comfy,  
naturally**

# TENCEL™ for Footwear

TENCEL™ Lyocell fibers from Lenzing make complete sustainable shoe solutions possible. They can be used for every part in the shoe, whether as textile fiber in the upper fabric, lining, insoles and laces / zipper / sewing thread, as nonwoven fiber in insoles or padding, or as TENCEL™ Lyocell powder in outsoles. With shoes made of TENCEL™ Lyocell fibers, a complete sustainable shoe solution becomes reality.

## complete shoe concept



## feels right features



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



### supply chain transparency

With fiber identification technology based on a special production process, TENCEL™ fibers can be verified as authentic in the value chain through Lenzing testing. This method of identification supplements transparency and traceability in the supply chain and ensures the authenticity of TENCEL™ fibers.



## sustainable production

TENCEL™ 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”.

Moreover, all Lenzing fiber production sites operate according to a certified Environmental Management and Occupational Health and Safety system (ISO14001, ISO45001).



## moisture management

Moisture management is an important criterion for shoes. TENCEL™ Lyocell fibers, especially in the construction of the inner lining, padding and insole, contribute to effective moisture management. Compared to synthetic fibers, the moisture management of TENCEL™ fibers is more efficient. The fibril structure of the fibers supports the body's natural thermal regulation mechanism and keeps feet feeling cool and dry.

Compared to synthetic fibers TENCEL™ Lyocell fibers have an efficient moisture uptake — in some cases an improvement in moisture management of up to 50% was measured with TENCEL™ Lyocell fibers.



## unfavorable for bacterial growth

Through moisture management, TENCEL™ 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™ 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™ Lyocell compared to cotton and polyester under moderate humidity conditions.



## contributes to breathability

TENCEL™ Lyocell fibers support body temperature regulating properties through their moisture management. Derived from natural material, the microscopic fibrils of lyocell cellulosic fibers are structured to regulate the absorption and release of moisture, contributing to fabric breathability that supports the body's natural thermal regulation. TENCEL™ Lyocell cellulose fibers have a higher vapor uptake than cotton.



Forest



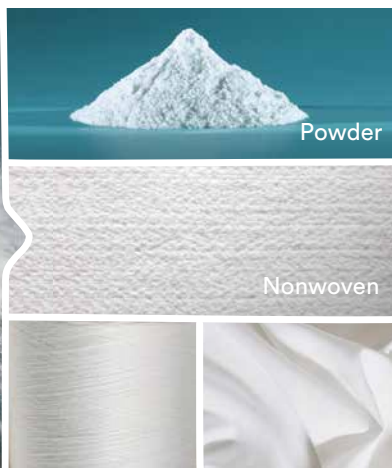
Wood



Pulp



Fiber



Yarn



Fabric

End product

# contact for further information

## HEAD OFFICE

**Lenzing:** Lenzing Aktiengesellschaft, Werkstraße 2, 4860 Lenzing, Austria  
Tel: +43 7672 7010, Fax: +43 7672 701 3880, E-mail: [fibers@lenzing.com](mailto:fibers@lenzing.com)

## GLOBAL OFFICES

### India: Lenzing Fibers India Pvt Ltd.

Shrivar Shrimat, 5th Floor (rear side), 1045, Avinashi Road, 641018 Coimbatore, Tamil Nadu, India  
Tel: +91 422 4292 800, E-mail: [india@lenzing.com](mailto:india@lenzing.com)

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

Unit 801-806, 8th Floor, Lu Plaza, 2 Wing Yip Street, Kwun Tong, Kowloon, Hong Kong  
Tel: +852 3718 5600, Fax: +852 3718 5601, E-mail: [hongkong@lenzing.com](mailto:hongkong@lenzing.com)

### Istanbul: Lenzing Elyaf A.Ş.

Huzur Mah. Maslak Ayazağa Cad. No: 4 I Blok Ağaçlı Ofis, 34396 Sarıyer / İstanbul, Turkey  
Tel: +90 212 349 7171, Fax: +90 212 349 7181, E-mail: [turkey@lenzing.com](mailto: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](mailto:jakarta@lenzing.com)

### New York: Lenzing Fibers Inc.

530 Seventh Avenue, Suite 808, New York, NY 10018, U.S.A.  
Tel: +1 212 944 7400, Fax: +1 212 944 7816, E-mail: [newyork@lenzing.com](mailto:newyork@lenzing.com)

### Seoul: Lenzing Korea Yuhan Hoesa

19th Floor, 2 Wiryeseong-daero, Songpa-gu, Seoul, 05544, Korea  
Tel: +82 2 782 6131, Fax: +82 2 782 6132, E-mail: [seoul@lenzing.com](mailto:seoul@lenzing.com)

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

Unit 06-08, 15th Floor, Garden Square, 968 West Beijing Road, 200041 Shanghai, China  
Tel: +86 21 3315 2438, Fax: +86 21 6341 0007, E-mail: [shanghai@lenzing.com](mailto:shanghai@lenzing.com)

### Singapore: Lenzing Singapore PTE Ltd.

111 Somerset Road, TripleOne Somerset 13-35|38, Singapore 238164, Singapore  
Tel: +65 65 506 730, E-mail: [singapore@lenzing.com](mailto:singapore@lenzing.com)

### Taiwan: Lenzing Taiwan Fibers Ltd.

7th Floor, 53 Dongxing Road, Xinyi District, Taipei City 11070, Taiwan (R.O.C.)  
Tel: +886 2 8768 1023, Fax: +886 2 8768 2933, E-mail: [taipei@lenzing.com](mailto:taipei@lenzing.com)

### Thailand: Lenzing (Thailand) Co., Ltd.

599 Moo 2 ThaToom Sub-District, SriMahaPhot District, PrachinBuri Province 25140, Thailand  
Tel: +66 37 624 123, E-mail: [prachinburi@lenzing.com](mailto:prachinburi@lenzing.com)

[www.tencel.com](http://www.tencel.com)

TENCEL™ is a trademark of Lenzing AG  
© 2022 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™) 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 Leaflet require a prior license from Lenzing AG.

For any further information, please visit our homepage [www.tencel.com](http://www.tencel.com).



Innovative by nature

ver 1.5 / 07-2022