

XTRA-DRY[®]

xtra-cool[®]

XTRA-THERMIC[®]

minerals[®]
SPORT

XTRA-FRESH[®]

Comfort technologies

New fibers for new challenges

NUREL
SYNTHETIC FIBERS

fibers.nurel.com



NUREL Company

Extensive knowledge and experience in nylon production

Since 1968, **NUREL** has accumulated profound experience in the production of **nylon yarns** and is nowadays considered one of Europe's leading companies, in terms of capacity, quality, service and product innovation.

Our two cutting-edge spinning plants and our outstanding draw-warping facilities, allow us to offer a range of products for lingerie, swimwear, and sports which are unique in the market and that are able to meet the most demanding customer's expectations.

We work for the fibers of the future by incorporating new technologies such as **nanotechnology**, **smart textiles** and other different programs of **functional textiles**.



Among the most demanded attributes for Athletic clothing industry are comfort, moisture wicking management and breathability.

NUREL Synthetic Fibers offers a range of products not only oriented to fulfil sport users' classic demands, but also to anticipate future consumer insights

We offer two different proposals for Athletic clothing:

- A complete range of **special sections**, designed to encourage moisture management, thermal isolation and comfort.
- A range of **functional fibers** to enhance freshness and hydration.





XTRA-DRY®

Dryness and comfort sensation

Moisture management properties

Helps to reduce the wet feeling during sports activity, maintaining the highest standards of comfort.

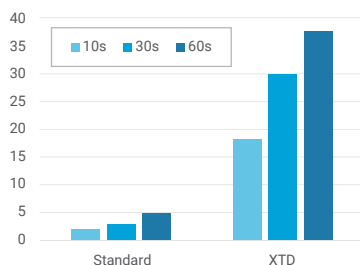
How does XTRA-DRY work?

- Thanks to its special propeller cross-section, XTRA-DRY provides a faster evaporation of moisture and sweat.
- Its four channels encourage the fiber to absorb moisture and “move” it away from the skin to the out-side of the fabric where it can easily evaporate.

Properties

- Moisture absorption increase 62%.*
- Increase air circulation.
- Permanent superior properties of moisture management, wicking and drying speed.*
- Excellent colour fastness and fabric touch.

Longitudinal propagation velocity



Test undertaken by independent lab comparing similar fabrics, one made of standard nylon and another of XTRA-DRY.



XTRA-DRY

Product Range

- Available in **PA6**.
- **Flat and textured** yarns.
- **Available counts:** 22/14, 44/14, 44/28, 44/34, 56/34, 78/28, 78/68.

Isolation & performance

Its exclusive geometry has been designed to increase thermal isolation and to improve comfort levels thus optimize performance.

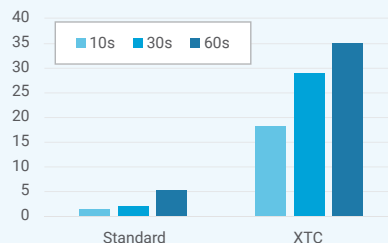
How does XTRA-COOL work?

This propeller hollow cross-section shape improves thermal isolation and water absorption during sport training, helping to reduce body temperature.

Properties

- It contributes to regulate body temperature during workout enhancing performance.
- Thermal isolation advantages.
- Superior properties of moisture management, wicking and drying speed.*
- Thanks to its hollow core, fabrics are lighter.

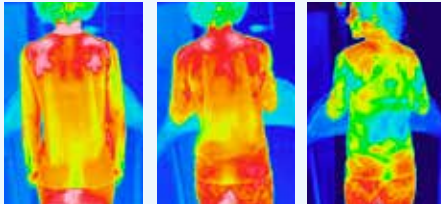
Longitudinal propagation velocity



Technical Report carried out by Leitat, Terrasa (Spain)

Thermal Analysis (Temp. of the shirt)

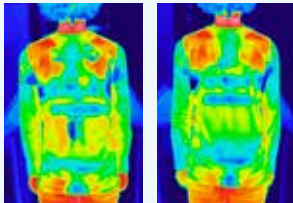
T_1 : Acclimatization. T_4 : 1/2 Recovery.
 T_2 : 1st Running. T_5 : End of Recovery.
 T_3 : 2nd Running.



$T_1=28.9^{\circ}\text{C}$

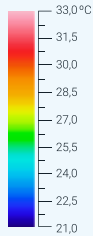
$T_2=29.3^{\circ}\text{C}$

$T_3=26.8^{\circ}\text{C}$



$T_4=26.3^{\circ}\text{C}$

$T_5=26.1^{\circ}\text{C}$



Test undertaken at Associazione Tessile e Salute, Biella (Italy).

Product Range

- Available in **PA6**.
- **Available counts:**
22/12, 44/24, 56/48,
78/48.



XTRA-COOL

Thermal isolation

XTRA-THERMIC hollow fiber is the material of choice for extra comfort, thermal isolation and lightness

How does **XTRA-THERMIC** work?

Our circular hollow cross-section confers isolation performance to the nylon fibers.*

Properties

- This nylon fiber has been specially designed for thermal protective garments.
- It is approximately 20% lighter than circular fibers with similar decitex.
- Excellent colour fastness and homogeneity.
- It is especially recommended for first layer clothing in direct contact with the skin on high temperature conditions.

Product Range

- Available in **PA6**.
- **Available counts:** 44/28; 44/14; 56/25;
56/14 60/30 44/30 78/60, 44/15.



XTRA-THERMIC



Energy & comfort: the perfect combination

Specially designed to energize and provide comfort. It contains water extract minerals that help to moisturize and to provide an energetic sensation

How does **SPORT MINERALS** work?

Thanks to our NOVAREL technology, deep-concentrated water from a salty natural spring, can be encapsulated and incorporated into the polymer matrix.

Also, NOVAREL technology incorporates active minerals that during a workout, or any time the garments is worn, provide an energizing sensation and hydration.

SPORT MINERALS also confers extra SPF protection to your activewear.

Properties

- Scientifically proven efficiency: After 14 days of use 12% skin hydration increase.
- It is recommended for first layer clothing in contact with the skin.
- It can be combined with any of our comfort cross-sections: XTRA-DRY, XTRA-COOL and XTRA-THERMIC.

Technical information

- High resistance to washing.
- Maintains the quality aspect of garments.
- NOVAREL technology allows the knitter to follow the standard textile routes.
- This product contains a cosmetic that is registered following European Regulation (EC) No 1223/2009.

Product Range

- Available in **PA6**.
- **Cross-sections:** Special sections available to promote isolation and comfort.
- **From 22 up to 156 decitex.**

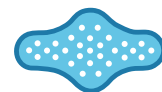
For any specific count, please contact your NUREL representative.



Standard



XTRA-THERMIC



XTRA-DRY



XTRA-COOL



Freshness benefits. Odor control*

Fiber with antimicrobials and anti-odor functions

How does XTRA-FRESH work?

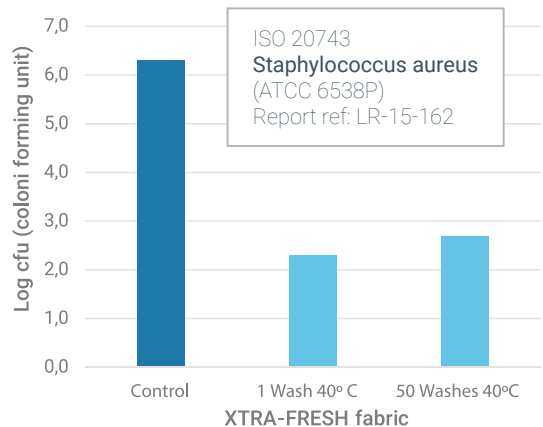
- It prevents bacterial growth, a major cause of body odor by using an Antimicrobial Masterbatch based on **silver ions**.
- XTRA-FRESH is designed to provide permanent freshness and it is safe for humans and for the environment.
- Its activity is limited to the surface of the textile, keeping it free from bacteria and thus free from odors.
- The additives are introduced during the melt spinning process, providing a strong resistance to washes.

Technical information

- It does not contain nanomaterials (2011/696/EU).
- It provides fabrics with durable protection against microbes. However, it does not protect the textile user against microbes.
- Industry standard protocol: **ISO 20743:2007** - Determination of finished products. Equivalent to
- JIS L 1902:2008.
- Complies with **REACH, Oekotex and European Biocide** legislation (European Regulation 528/2012).
- Knitters should follow the specific recommendations for scouring, bleaching, heat setting and finishing.

* It contains a biocide product to preserve freshness. Active ingredient: silver ions.

Properties



Product Range

- Available in **PA6**.
- **Cross-sections:** Special sections available to promote isolation and comfort.
- **From 22 up to 156 decitex.**

For any specific count, please contact your NUREL representative.



Standard



XTRA-THERMIC



XTRA-DRY



XTRA-COOL



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Revolution in comfort

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