

 **xtra-cool**[®]

 **minerals**[®]
SPORT

 **XTRA-DRY**[®]

 **XTRA-FRESH**[®]

 **XTRA-THERMIC**[®]

Comfort technologies

New fibers for new challenges

NUREL
SYNTHETIC FIBERS 





NUREL

Extensive knowledge and experience to the production of nylon fibers

Since 1968, **NUREL** has accumulated profound experience in the production of **nylon yarns**. Today, we are recognized as one of Europe's **leading companies**, renowned for our capacity, quality, service, and product innovation.

Our cutting-edge spinning plants and our outstanding **draw-warping** facilities, enable us to offer a diverse range of products specifically tailored for **lingerie, swimwear, and sports applications**. Our offerings are unparalleled in the market, designed to meet the highest standards and exceed the expectations of even the **most demanding customers**.

We are dedicated to advancing the future of fiber technology by integrating cutting-edge innovations such as nanotechnology, sustainable fibers and various programs focused on functional textiles.

NUREL Synthetic Fibers offers a range of products designed to not only meet the classic demands of sport users but also **anticipate future consumer insights**.

We offer two different proposals for **Athletic clothing**:

- A complete range of **special sections**, designed to promote efficient moisture management, thermal isolation, and overall comfort. These sections ensure that athletes stay dry and comfortable during their activities.
- A range of **functional fibers** to enhance freshness, hydration and engineered to provide an extra level of comfort.



NUREL
SYNTHETIC FIBERS





Dryness and comfort sensation

Moisture management properties

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

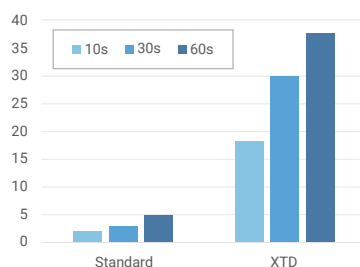
How does XTRA-DRY work?

XTRA-DRY utilizes a **unique propeller cross-section design** that facilitates rapid evaporation of moisture and sweat.

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.

Product Range

- Available in **PA6 & PA6.6**
- **Flat and textured** yarns
- **Available counts:** 22/14, 44/14, 44/28, 44/34, 56/34, 78/28, 78/68



XTRA-DRY

Isolation & performance

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

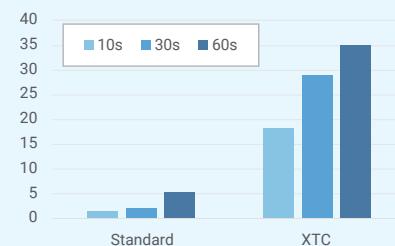
How does XTRA-COOL work?

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

Properties

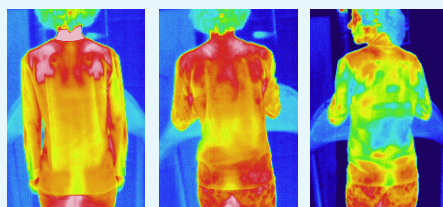
- It contributes to **regulate body temperature** during workout enhancing performance.
- **Thermal isolation** advantages.
- Superior properties of **moisture management, wicking and drying speed.***
- Thanks to its hollow core, **fabrics are lighter.**

Longitudinal propagation velocity



Technical report carried out by Leitat, Terrasa (Spain)

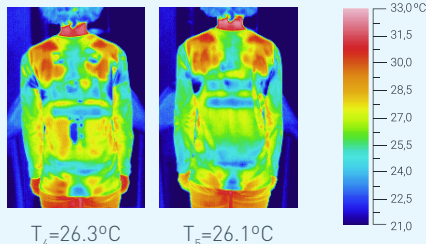
Thermal Analysis



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

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

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



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

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

T_1 : Acclimatization.

T_2 : 1st Running.

T_3 : 2nd Running.

T_4 : 1/2 Recovery.

T_5 : End of Recovery.

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 color 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 & PA6.6**
- **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

Specifically **designed to energize** and provide comfort. It includes mineral water extracts that contribute to moisturizing and provide an energizing sensation.

How does SPORT MINERALS work?

Our innovative NOVAREL technology allows for the encapsulation and **integration of deep-concentrated water** from a natural salty spring into the polymer matrix.

This technology **incorporates active minerals** that provide an energizing sensation and hydration while wearing the garment, whether during a workout or any other time.

Additionally, our SPORT MINERALS offer the added benefit of **extra SPF protection for 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

- **Excellent washing resistance.**
- **Preserves the quality and appearance** of the garments.
- **NOVAREL technology** allows the knitter to follow the **standard textile routes**.
- This product **contains a cosmetic** that is registered in accordance with **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.**

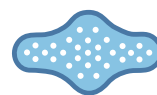
For any specific count, please contact your NUREL representative.



Standard



XTRA-THERMIC



XTRA-DRY



XTRA-COOL

Freshness benefits. Odor control*

Fiber with antimicrobials and anti-odor functions

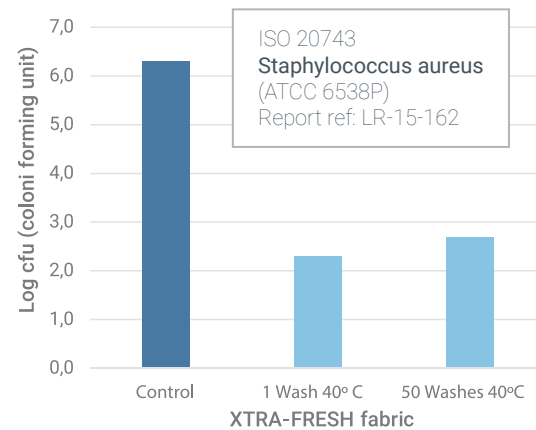
How does XTRA-FRESH work?

- 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.

Properties



Product Range

- Available in **PA6 & PA6.6**
- **Cross-sections:** Special sections available to promote isolation and comfort.
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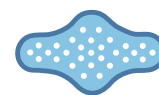
For any specific count, please contact your NUREL representative.



Standard



XTRA-THERMIC



XTRA-DRY



XTRA-COOL

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



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Revolution in comfort

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