

ENVISIONING A SUSTAINABLE TEXTILE INDUSTRY



WHAT IS RECO NYLON®?

A NEW LIFE TO NYLON FROM RECLAIMED MATERIAL

RECYLED NYLON YARNS WITH 100% RECYCLED CONTENT

NUREL's recent investments in advanced compounding and recycling facilities have enabled us to launch an extensive range of nylon yarns made from **post-industrial and pre-consumer sources**. This innovative initiative allows us to transform waste into high-quality recycled yarns, branded as **Reco Nylon**.

Reco Nylon offers sustainable, customized solutions using PA6 waste materials, featuring **up to 100% certified recycled content**. This product maintains **consistent properties and an environmentally-friendly lifecycle**, ensuring that quality and performance standards are met for demanding applications such as sportswear, swimwear, and underwear.

Our novel product line is committed to reducing **CO₂ emissions and water consumption**. Furthermore, **Reco Nylon** is **produced using renewable energy sources**, aligning with our dedication to sustainability.

Reco Nylon is available in a wide range of products, **from 22 to 78 dtex**, and comes in various formats, lusters, both flat and textured options.

OUR RECYCLING PROCESS

Our **thermomechanical regeneration system** does not require the use of any chemical substances to produce our environmental-friendly yarns.

1 In the initial phase, we meticulously source reclaimed materials from both **internal and external sources**. These materials then undergo a thorough **identification and selection** process at our facilities.

2 These **materials are remelted** in our recycling units to produce recycled PA6 polymer through a continuous **thermomechanical recycling process**.

3 The recuperated polyamide polymer is **reconverted into high quality nylon yarns**. At this phase, we can incorporate colour pigments.



POS-INDUSTRIAL AND
PRE-CONSUMER TEXTILE WASTE



CONTINUOUS
MECHANICAL PROCESS



RECYLED
POLYMER

RECO NYLON® FEEDSTOCK

RECLAIMED MATERIALS WITHIN THE TEXTILE INDUSTRY'S VALUE CHAIN

At NUREL, we are committed to sustainability by utilizing reclaimed materials that would otherwise likely end up in landfills or be incinerated.

SELECTED INTERNAL POST-INDUSTRIAL SOURCES

As an integrated production site, NUREL recycles all **post-industrial waste** generated from our spinning lines. Our state-of-the-art recycling units enable us to transform this waste into a range of high-quality products with a **reduced carbon footprint**, aligning with our Zero Waste policy.



EXTERNAL PRE & POST-CONSUMER WASTE AND FABRIC-TO-FIBER VALORIZATION

Our **UPtextile project** focuses on selecting **discarded fabrics** from across the textile sector's value chain and converting this waste into new polyamide products. UPtextile aids the textile industry in upcycling their waste into valuable recycled yarns.

Additionally, NUREL has access to **a variety of other pre and post-consumer nylon-based materials**, including fishing nets, monomaterial films, ropes, and PA injected parts. These materials, also can be reprocessed at our recycling units.



SPINNING



DRAW WARPING



100% RECYCLED
NYLON YARNS

SUSTAINABLE POLYMER AND FIBER PRODUCTION

INTEGRATED SOLUTIONS IN A SUSTAINABLE PRODUCTION SITE

ONE SITE, ONE GOAL

NUREL, a renowned European producer of polymers, biopolymers, and fibers boasts over fifty years of expertise. Based in Spain, our unique approach involves having **all production stages and recycling processes on the same site**, ensuring efficiency, quality control and sustainability.

OUR COMMITMENT

Compliant with **ISO 14001 and 50001** standards, we focus on ecodesign and the circular economy in textiles. Our integrated site model enhances the **sustainability of our products and processes**.

INNOVATION ON SUSTAINABLE FIBERS

Our R&D team is dedicated to creating fiber and polymer products **from reclaimed materials within the textile industry's value chain**. This in-house innovation is facilitated by our integrated site.

ENVIRONMENTAL ACCOUNTABILITY:

We conduct **Life Cycle Assessments to understand the cradle-to-gate impacts** of our products. The Environmental Product Declaration (EPD) for **Reco Nylon** exemplifies our commitment, offering a detailed analysis of the environmental impact of producing 1kg of this product, with every step scrutinized for environmental efficiency.



RECO NYLON CERTIFICATION

CONTENT AND MASS BALANCE CERTIFICATIONS AVAILABLE

Reco Nylon yarns can be certified according to GRS and ISCC PLUS.

GRS: RECYCLED CONTENT CERTIFICATION



NUREL recycling process is certified by **Global Recycled Standard (GRS)**, an international certification standard for products made with recycled materials. It sets requirements for the use of recycled content, tracking and tracing of materials, and social and environmental practices throughout the production process.

The **GRS** certification **ensures transparency and credibility in the use of recycled materials** in various industries. It helps consumers make informed choices about environmentally friendly and socially responsible products.

ISCC PLUS: MASS BALANCE CERTIFICATION



NUREL's production site and processes are **ISCC Plus Certified**. This certification signifies our ability to process and generate **circular materials using a mass balance approach**.

The **ISCC Plus certification system** guarantees the traceability and sustainable sourcing of materials across the entire supply chain, encompassing social, environmental, and also economic dimensions.



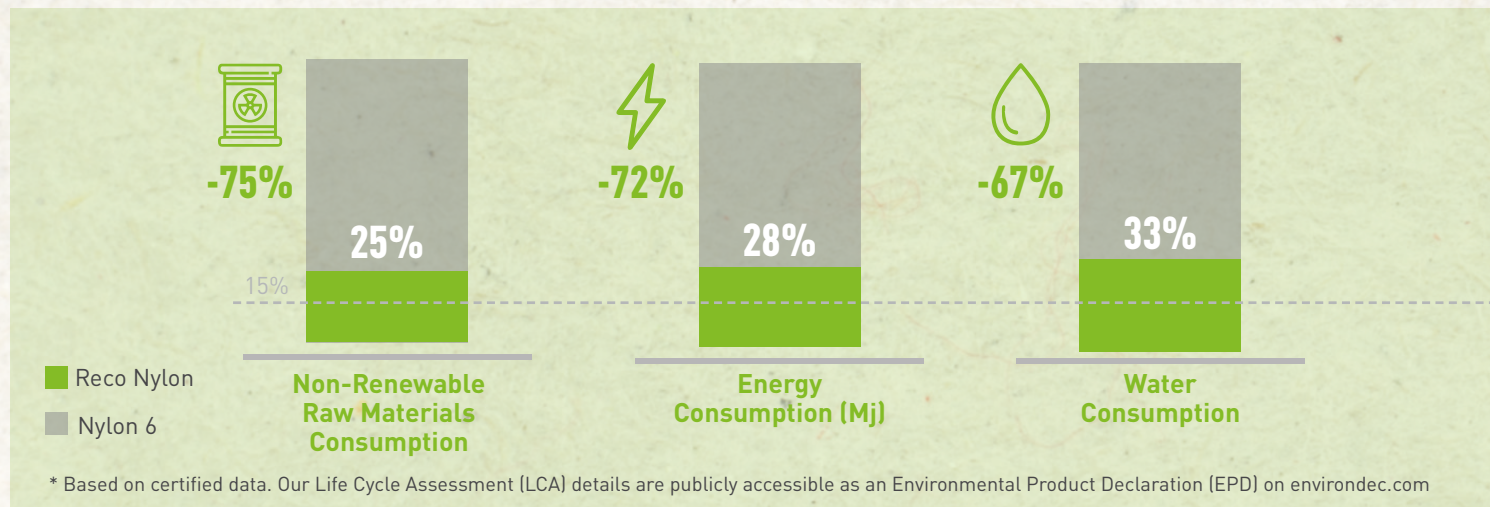
SUSTAINABILITY PERFORMANCE FACTS

At NUREL, we are involved in studying the impact of our products through **Life Cycle Analysis (LCA)***, aiming to promote sustainability in all our processes. The LCA reveals that producing **Reco Nylon** by recycling polyamide (PA), we bypass the energy-intensive polymerization process, substantially reducing the consumption of **water, natural gas, nitrogen, steam, and electricity**.

Furthermore, **Reco Nylon** is produced entirely in-house, cutting CO₂ emissions from both manufacturing and material transport. As a result, producing **1 ton of Reco Nylon emits 74% less CO₂** equivalent than manufacturing 1 ton of Nylon 6 yarn.

**-75% LESS USE OF
NON-RENEWABLE
FOSSIL MATERIALS***

REDUCING RESOURCES CONSUMPTION*



DECREASING ENVIRONMENTAL IMPACTS*

The production of **Reco Nylon** generates **60% less CO₂ emissions than standard PA compounds.**

Therefore, a production of 1 ton of **Reco Nylon** reduces emissions of an equivalent to*:



ACIDIFICATION POTENTIAL
pH-reduction minimized by 90%*



EUTROPHICATION POTENTIAL
99% less impact on fresh water*

**-60% CARBON
FOOT PRINT**



CO₂ produced by a
car driving 18.937 km



CO₂ produced by
**558.340 phones
being charged**

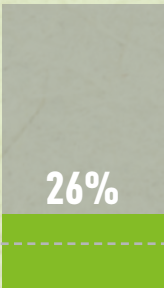


CO₂ absorbed by
**22.200 m² of forest
in one year**



CO₂ produced by
**1,69 tons of waste
recycled instead of
landfilled**

*Calculations based on Greenhouse Gas Equivalencies Calculator | US EPA



**Global Warming
Potential (kg CO₂-eq)**



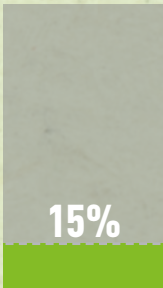
-90%



**Ozone Depletion
(kg CFC11eq)**



-85%



**Residue generated
(Tn/Tn)**



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