

# A SUSTAINABLE END OF LIFE CYCLE FOR NYLON

# INTRODUCING NERIDE® BIODEGRADABLE

## FACING SUSTAINABILITY CHALLENGES

- Globally the fashion industry is responsible for 10% of all greenhouse gas emissions.
- The textile industry is the second polluting industry on the planet, contributing to 20% of global wastewater.
- Fast-fashion leads to huge amounts of clothing thrown away every year causing a significant impact on the environment.

## MIXED MATERIALS TEXTILE WASTE

The complex blends of synthetic and natural fibers found in modern garments make sorting, collecting, and recycling a difficult task. Currently, there is no available technology to effectively address this issue, resulting in a large portion of textile waste being disposed of in landfills.

## WHAT NERIDE® BIODEGRADABLE IS?

- NUREL proposes a solution for nylon textiles that end their lifespan in landfills.
- NERIDE BIODEGRADABLE is a nylon 6 yarn that **biodegrades at the end of its life-cycle** and is transformed into methane which, if properly captured, can be used as green energy.
- NERIDE BIODEGRADABLE can **biodegrade in aerobic and anaerobic environments\***.
- NERIDE BIODEGRADABLE is not decomposed by oxygen or UV rays, **it is not oxodegradable**.
- It **maintains the properties of PA6**. No loss of physical properties or shelf life. It only degrades when it comes into contact with an active biological environment.
- It can be processed following standard **PA6 production methods**.

## NERIDE BIODEGRADABLE CLAIMS

- This product has been designed for landfill gas-to-recovery.
- If properly discarded in landfills, this product can be **valorized to green energy**.
- **Anaerobic biodegradation\*** in landfill following: ASTM D5511.
- **Aerobic biodegradation\*** in soil according to ISO 17556: 2012.

NERIDE  
BIODEGRADABLE  
can be valorized to  
green energy



## NERIDE BIODEGRADABLE CARBON FOOTPRINT IMPACT

- The final disposal/waste system has an important role in the carbon footprint of any material.
- Carbon foot print impact should be analysed according to each disposal scenarios.
- The primary carbon impact of NERIDE BIODEGRADABLE is related to landfill disposal where resulting methane is managed and converted to energy, providing approximately a **15% carbon reduction**.

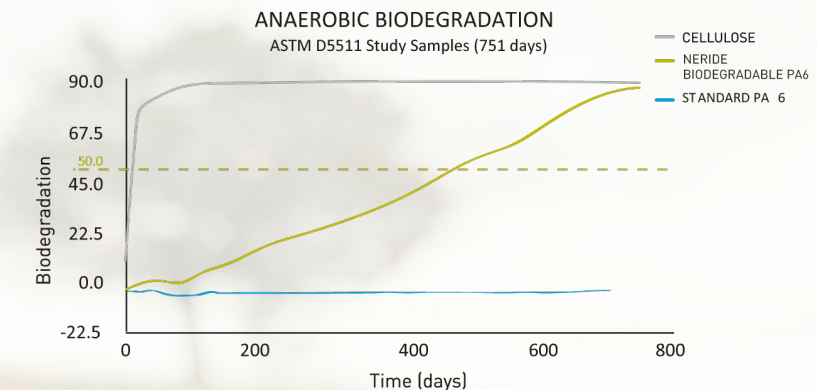
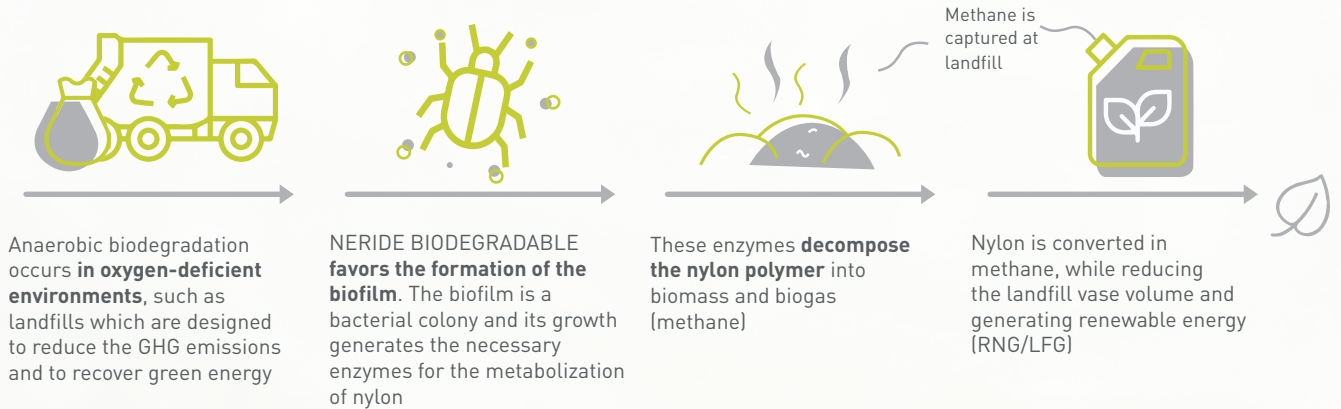
Up to  
**15%**  
CO<sub>2</sub> footprint

\* As per 2023 "biodegradable" claim is not accepted in some territories. Please address to the latest regulations for each territory.

# HOW DOES IT WORK?

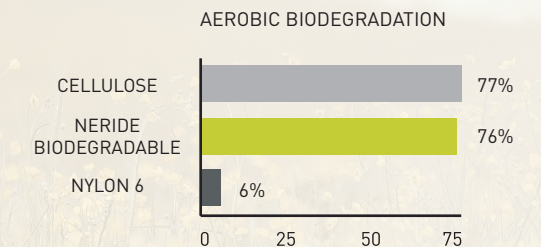
## ANAEROBIC BIODEGRADATION\*: NYLON FABRIC IS LANDFILLED & VALORIZED TO GREEN GAS

- **Anaerobic Biodegradability** according to ASTM D551. After 751 days: up to 84,2% biodegradation.



## AEROBIC BIODEGRADATION\*: IN CASE OF INAPPROPRIATE LITTERING IN SOIL

- NUREL does not support littering of any kind, but, in case of an inappropriate disposal of the textile waste, **NERIDE BIODEGRADABLE will also biodegrade in soil**.
- Aerobic biodegradation is the degradation of organic matter by microorganisms in environments with oxygen such as soil.
- **Aerobic Certification**, according to ISO 17556:2019, states a biodegradation of 76% after 90 days in active soil.
- Under the same conditions NERIDE BIODEGRADABLE biodegrades at same speed as cellulose.





**PLEASE DISCARD PROPERLY,  
DO NOT LITTER**

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