

Lantal



*Solutions for greener aircraft
in the sky*

Lantal's contribution to sustainability

Core value fore-sight



Sustainable solutions are part of Lantal's culture – and therefore of production, products, and services.

Lantal is always looking for new ecological yet cost-effective fore-sighted solutions **to make your aircraft fly more ecologically.**



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Lantal internal sustainability initiatives



Initiatives for responsible use of resources

Heat recovery and water recycling system



In the dyeing plant, around **30,000 cubic meters** of waste water above 50 degrees Celsius are collected each year in a tank to store the heat.

A heat exchanger heats the fresh water for the dyeing plant. A similar system is used for drying bobbins and skeins.

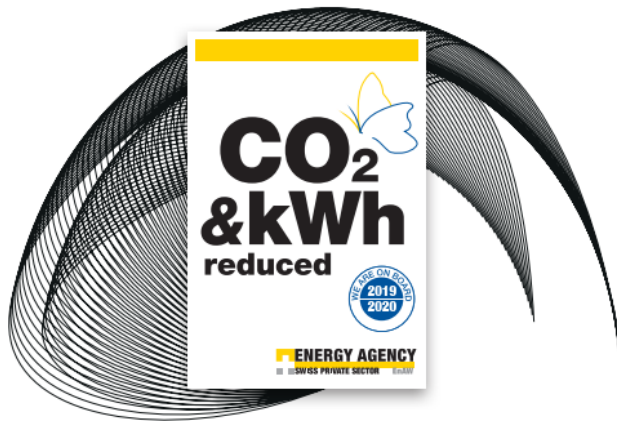


In the same process, all waste water, which amounts to around **60,000 cubic meters**, is purified in a special system with the addition of slaked lime to such an extent that it can be discharged into the public sewage treatment system.

Continuous CO₂ reduction

Certificate of the Swiss Private Sector Energy Agency

Voluntary Climate Protection and Energy Efficiency



Lantal Textiles AG

Lantal Textiles AG is convinced of the need to stand up for sustainable climate protection. By voluntarily declaring its adherence to the Swiss Private Sector Energy Agency programme, Lantal Textiles AG commits to actively reducing CO₂ emissions and optimizing energy efficiency. The Swiss Federal Government, cantons and private sector partners honor the target agreement.


Dr. Jacqueline Jakob
Swiss Private Sector Energy Agency

1st January 2019


Erich A. Kalbermatter
Swiss Private Sector Energy Agency

ENERGY AGENCY
SWISS PRIVATE SECTOR ENAW

Reduction of CO₂ emissions
throughout the production process
→ CO₂ label 2019 of the Swiss
Private Sector Energy Agency
→ **Annually renewed**

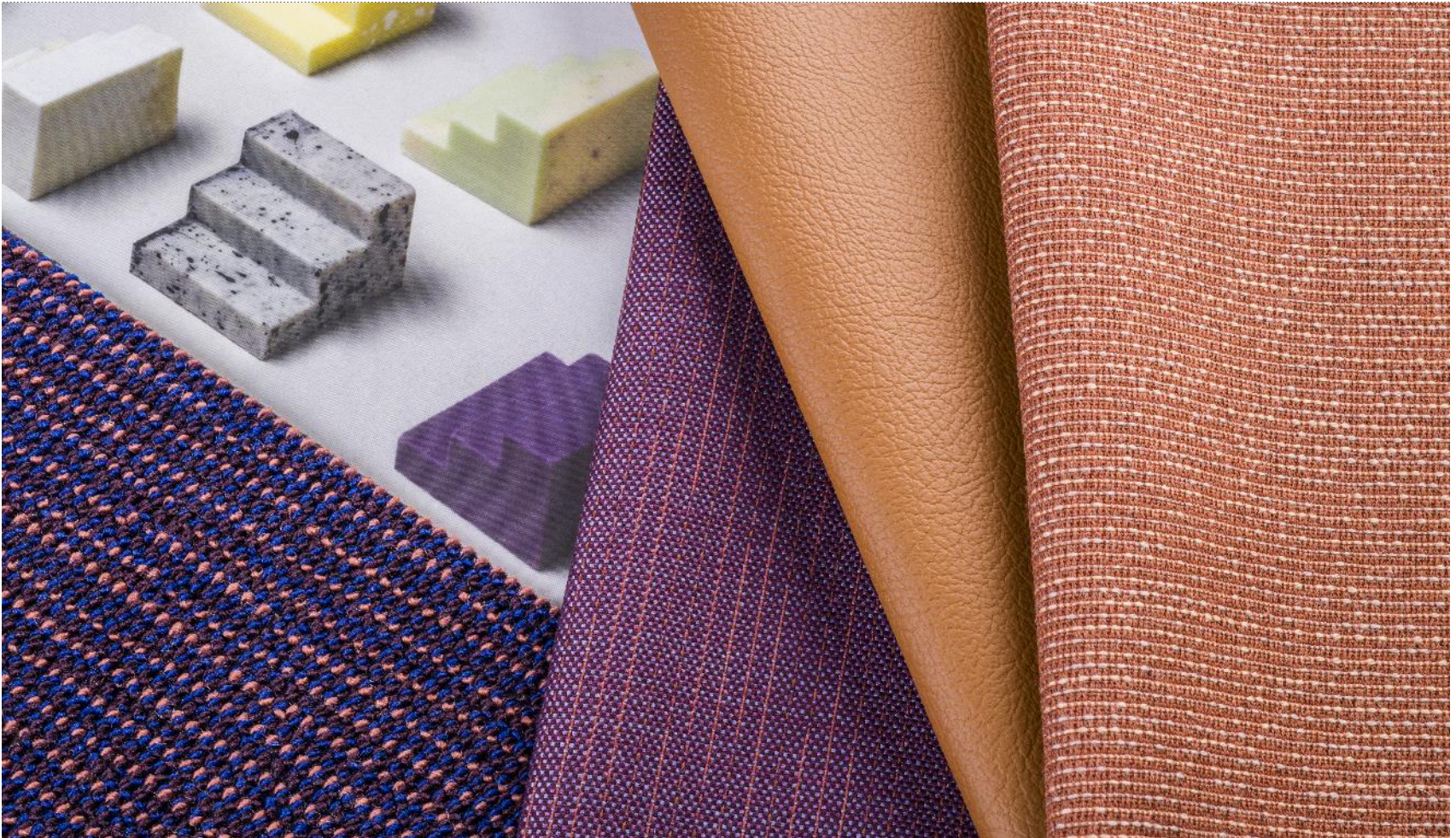
Careful use of resources

Recycling



- Lantal separates various products such as paper, aluminum, PET and metals, which are recycled in a local recycling facility.
- Non-recyclable materials are brought to a local waste incinerator. The generated heat is used to produce electricity for the general public.
- Lantal has a continuous process to minimize the leftovers in the carpet, flat and velvet weaving mill. Therefore no residues occur in the first place.
- Overall, Lantal **recycles 70%** of its waste.

Lantal sustainable products



Carpets with ECONYL® - yarn

Improved sustainability



Lantal tries to improve the sustainability of its products whenever possible. One important step in the process for Lantal was to switch to the ECONYL® polyamide-yarns.

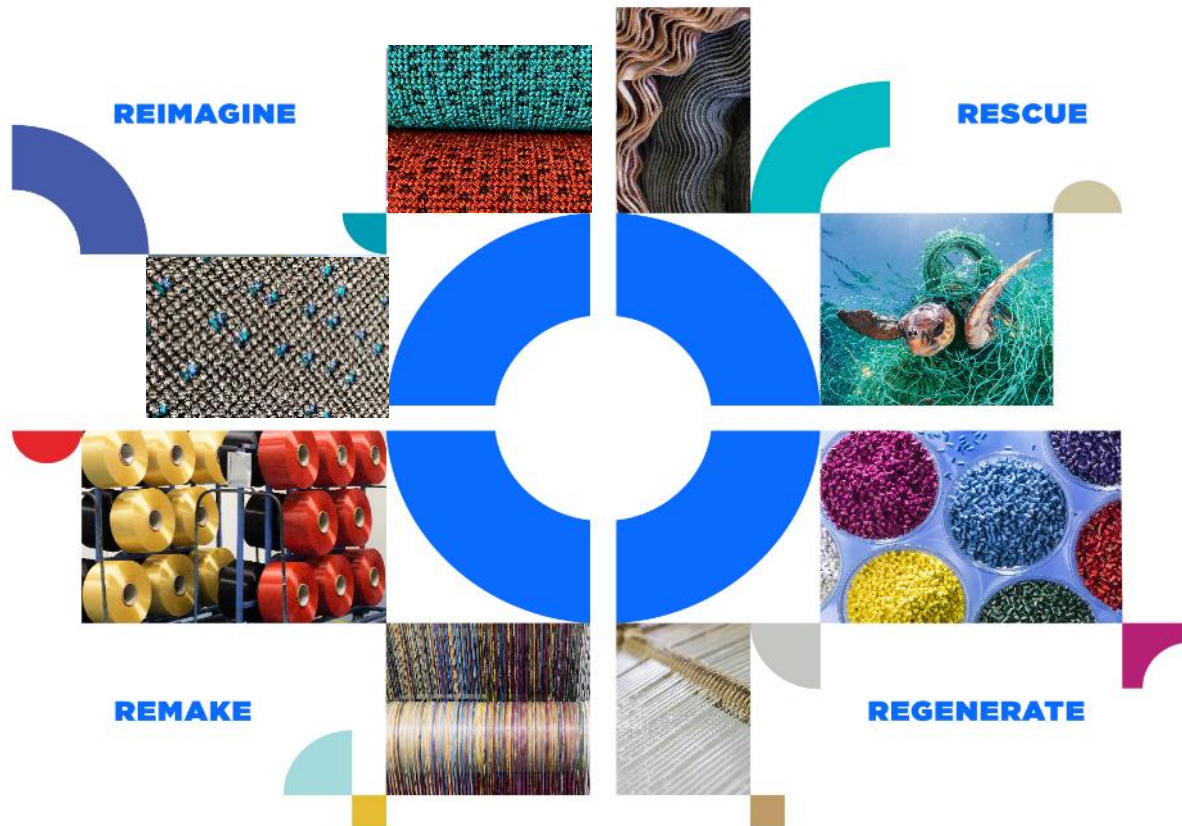
Lantal uses ECONYL®-yarn for the following aircraft carpet qualities:

- Polyamide
- Polyamide light



Carpets with ECONYL® - yarn

ECONYL® - regeneration system



Carpets with ECONYL® - yarn

Replacing standard polyamide with ecological ECONYL®-yarn



Econyl® consists of **100% recycled raw materials** such as fishing nets, yarn waste and fabrics.

It's exactly the same as virgin nylon and can be recycled, recreated and remoulded infinitely.

By using polyamide ECONYL®, Lantal helps to reduce the worldwide Nylon waste. In addition, the use of ECONYL® also reduces the consumption of oil, water and energy during the fiber production process.



Lantal sustainable products

Climatex® LifeguardFR™ - Fully biodegradable seat cover fabric



Climatex® LifeguardFR™

Comfort and ecological soundness



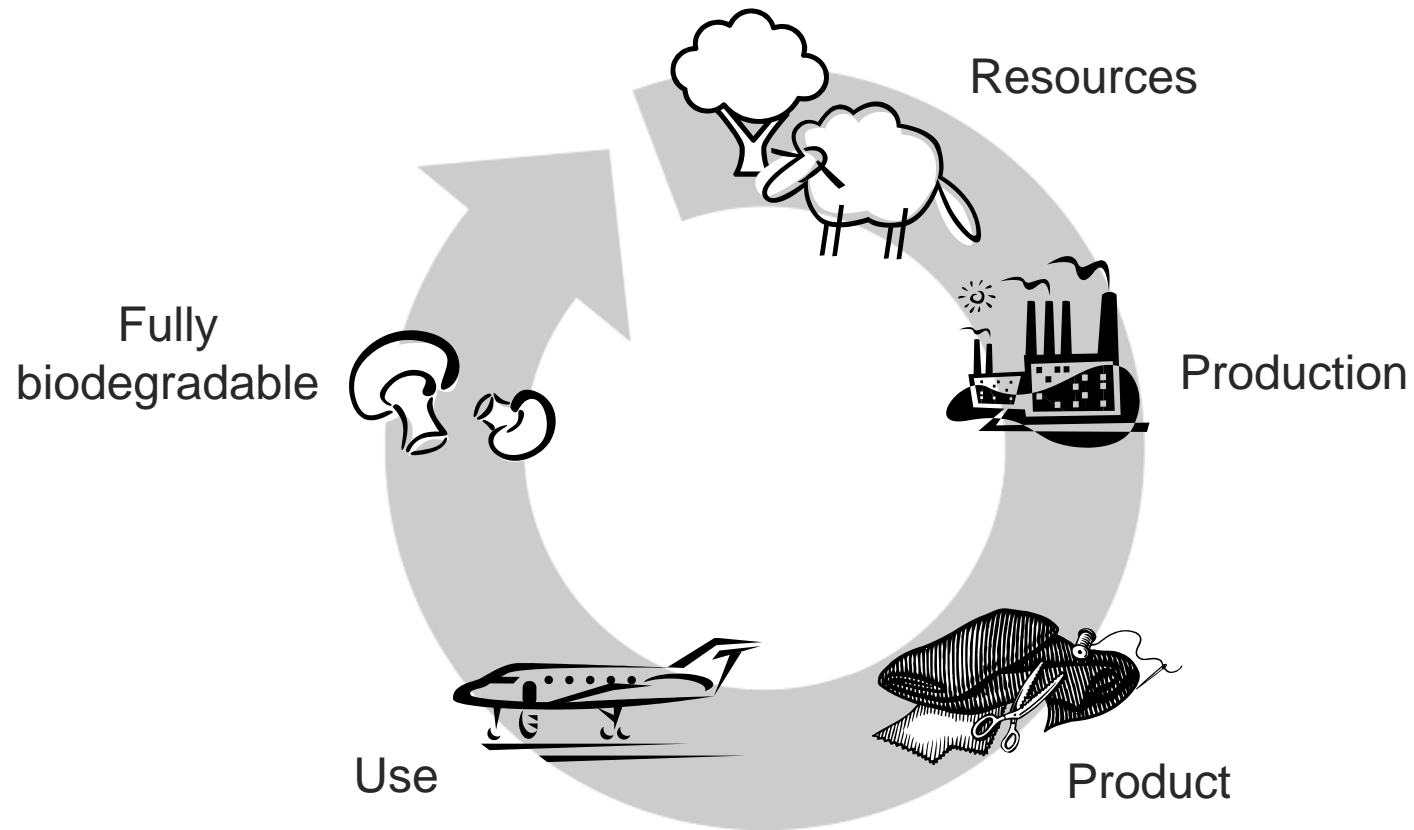
Key assets

- Precise: Fully biodegradable (advanced technology)
- Intelligent: Ecologically sound production (Cradle to Cradle)
- Comfortable: Enhanced comfort through climatized seating (moisture management, breathability)
- Beautiful: Comfortable surface feel and a beautiful visual appearance (exclusive materiality, brilliance)

→ Climatex® LifeguardFR™ opens up a new era of ecological cabin interiors by combining unprecedented passenger comfort and unmatched ecological soundness

Climatex® LifeguardFR™

Ecological soundness – Cradle to Cradle principle



Materials

- **Wool** originates from carefully selected farms in New Zealand
- Cellulose - in the form of redesigned **ViscoseFR™** - obtained from European beechwoods

Flame resistance

- Flame retardant is incorporated already in the Viscose FR™ fiber.



Biodegradability

Consisting of renewable resources (virgin wool, beechwood cellulose) and 16 ecologically safe dye chemicals, Climatex® LifeguardFR™ is an environmentally safe industrial product. After a long service life, the seat cover fabric is **completely biodegradable**.

First, the non-recyclable items have to be removed from the seat cover (e.g. velcros, etc.). When all additional components are removed, the Climatex® LifeguardFR™ fabric is completely compostable. After shredding the fabric, the pieces can be composted at a biogas facility.

In cooperation with the customer, the recycling potential of Climatex® LifeguardFR™ will be fully exploited. Within the projects, we individually define the best partners and processes to find a sustainable solution.

Certificate

- The environmental sustainability of Climatex® LifeguardFR™ is confirmed in all respects by EPEA (Independent Environmental Organization, Hamburg).
- Climatex® LifeguardFR™ achieved the Cradle to Cradle Gold certificate by MBDC, a world-renowned American product and process design firm.

Innovative, environmental friendly products

Lightweight seat cover fabrics and carpets



Lightweight seat cover fabrics and carpets

Lower CO₂ emissions

Lantal offers a wide range of **lightweight seat cover fabrics (330 g/m²)**
and carpets (1080 g/m²).

The minimized weight leads to several advantages:

Reduced kerosene consumption

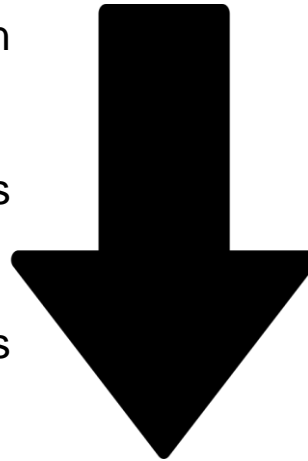
Easy to handle (ergonomics)

Lower CO₂ emissions

Reduced logistic costs

Cost savings

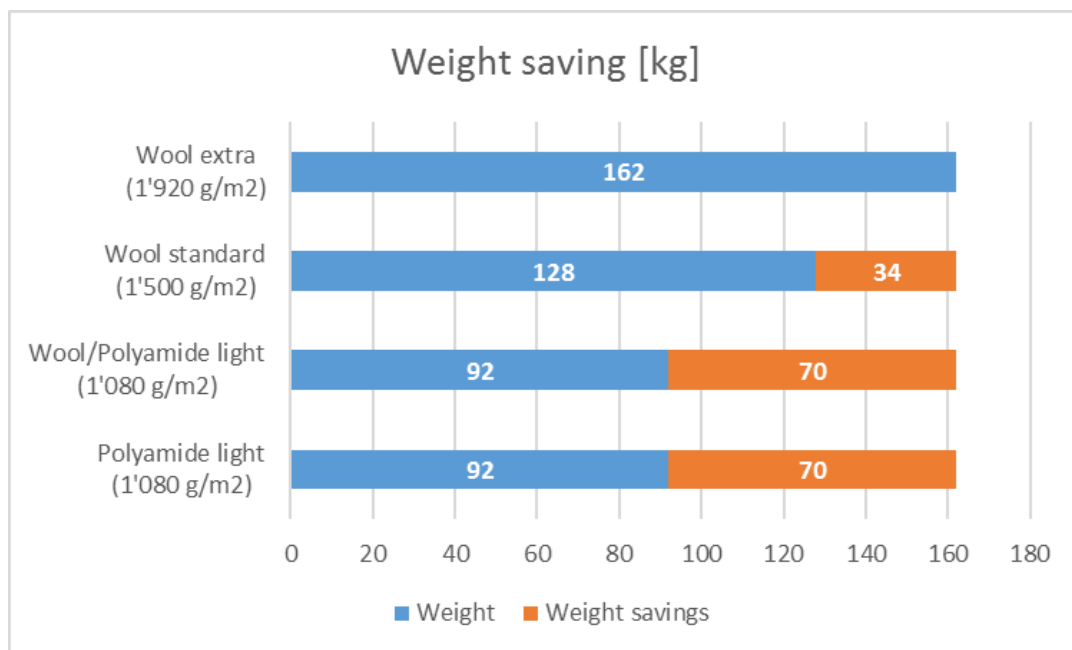
More payload possible



Lightweight carpets

Weight savings example

Lantal's **lightweight carpets Polyamide light** and **Wool/Polyamide light** are among the lightest carpet qualities available.



As an example, for a A320 using 85 m² carpet these weight savings can be achieved with Lantal's lightweight carpet qualities.

Polyester fabrics

Recycling of seat cover and curtain fabrics

Lantal fabrics of 100% flame-resistant polyester have the following compelling advantages:

- Recyclable: Polyester can be **completely recycled** and can therefore be reused in other products
- A long lifetime due to good abrasion resistance
- Washable
- Inherently flame-retardant



Polyester fabrics

Recycling of seat cover and curtain fabrics

First, the non-recyclable items have to be removed from the ready-made part (e.g. velcros, etc.). When all additional components are removed, the polyester fabric is **completely recyclable**.

In cooperation with the customer, the recycling potential of polyester fabrics will be fully exploited. Within the projects we individually define the best partners and processes to find a sustainable solution.



Pneumatic Comfort System (PCS)

Fusion of comfort and ecology



Pneumatic Comfort System (PCS)

Offers unique seating comfort and ecological benefits

Thanks to air-filled structures instead of conventional foam cushions, airlines can benefit from significant weight reductions, lower kerosene consumption, **lower CO₂ emissions**, and cost savings.



Pneumatic Comfort System (PCS)

Spectrum of features to address passengers comfort

PCS is a revolutionary air cushion system that redefines passenger comfort and well-being.

Key Facts

- Outstanding comfort
- Reduced operation cost
- Adjustable firmness
- Lumbar support and massage
- Dynamic contouring
- Automatic gap filler
- Maintenance free
- Hygienic



Wool

A renewable resource

Lantal operates its own wool spinning mill for carpet yarns in Switzerland. Carpets made of wool have natural properties such as acoustic insulating and preventing soiling. Textiles made from wool yarns are not only soft and breathable, but even more important: wool is suitable and comfortable for cold and hot temperatures. Wool is a natural fiber and thus a **renewable resource**.



Lantal sustainable products

The right quality leads to extended life cycle



- Upon customer request, Lantal can produce fabrics and carpets with extremely good abrasion resistance
 - The woolen yarns for our carpets are fully made in-house – the yarn in our wool spinning mill and the carpets in our weaving mill
 - The yarns for our fabrics are twisted in the EU
- Leads to extended lifetime and therefore **reduced consumption of resources and energy.**
- Benefits for airlines:
- Reduces frequency of replacements
 - Saves related de-installation and re-installation costs

Lantal is constantly working on eco-efficient and energy saving solutions for new products and services.

Are you interested to learn more about Lantal's projects? Would you like to team up for new solutions and to develop greener aircraft for the future?

Talk to us – we are ready for the next step.

Lantal



Lantal – Transportation Fashion
The highest level of well-being for passengers