



CIRCTEX

Interreg 
North-West Europe
European Regional Development Fund

NEWSLETTER #2020-01





CIRCTEX

CircTex focuses on the development of recycling and production techniques in a closed process chain for polyester (PET) workwear.

The textile industry in the NWE zone consumes 17 million tonnes of non-renewable raw materials annually. That is why the transition to a circular economy within the textile industry is pressing.

Industrial clothing is the ideal starting point for circularity in the textile industry. Because reuse is prohibited, this sector is completely dependent on new materials. The quality requirements are also higher and the effect of use higher than in other textile sectors. The results obtained in CircTex will therefore be equally applicable in the other textile sectors.

CircTex will provide a proof-of-concept for fully recyclable workwear within NWE by developing technologies for large-scale processing of PET workwear, which will be validated and demonstrated in a closed chain pilot.

Optimising the integration of these technologies and process steps is essential to ensure recyclability.

Furthermore, the workwear sector is the ideal starting point for industry-wide innovation, as it is used to working with (inter) national standards and public tenders that demand more and more circularity in their specifications.



CircTex will stimulate growth of the NWE textiles industry, creating numerous jobs in the future. As the textiles industry is transnational, territorial cooperation in NWE is crucial for significant impact.

FIRST RWS JACKET DESIGN

Groenendijk has designed a first prototype of an RWS jacket.

The jacket is the first clothing item to be followed by trousers etc. The goal is to use as less trimmings on the garments as possible.

It's important that all the pockets etc. will be constructed in such a way as to meet the EN 343 requirements.

The first RWS jacket will show that the design is workable and fits the needed EN certifications EN 343 and EN 20471.



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Definitive samples should be ready by August 2020.

SPINNING AND WEAVING TECHNOLOGY

Antex and IBQ Fabrics have selected a **taslanised PET polyester yarn** to produce the following fabrics, finished with DWR (C0 or C6):

- 2 layer 220 – 250 g/m² in HV Orange & black
- 3 layer 350 g/m² in HV orange & black
- Twill 245 g/m² black
- Twill 245 g/m² HV orange
- Canvas 245 gm² HV orange
- Canvas 245 g/m² Black

During the production of the fabrics, IBQ will take fabric sample to be tested by Antex:

1. dyed fabric
2. dyed fabric with DWR finish

to see the influence of DWR on the recycle process.

After the first wear test with our Circular garments Centexbel will test the amount of washing detergents, fabric softeners etc. that are left behind in the garments.

Next to jackets and trousers Groenendijk will develop a polo shirt and a softshell jacket. T

For development of polo a standard fabric of Hydrowear (100% pes fabric) will be used of which 8 mtrs will be sent to Antex to test if this is workable.

TRIMMINGS

The challenge in Trimmings is to find circular Pes/Pet zipper without metal end stoppers. In Italy we have found a zipper manufacturer that has 100% Pes zippers.

Samples have been sent to Antex to test. Specs have been asked and will be sent to Centexbel to check their durability.

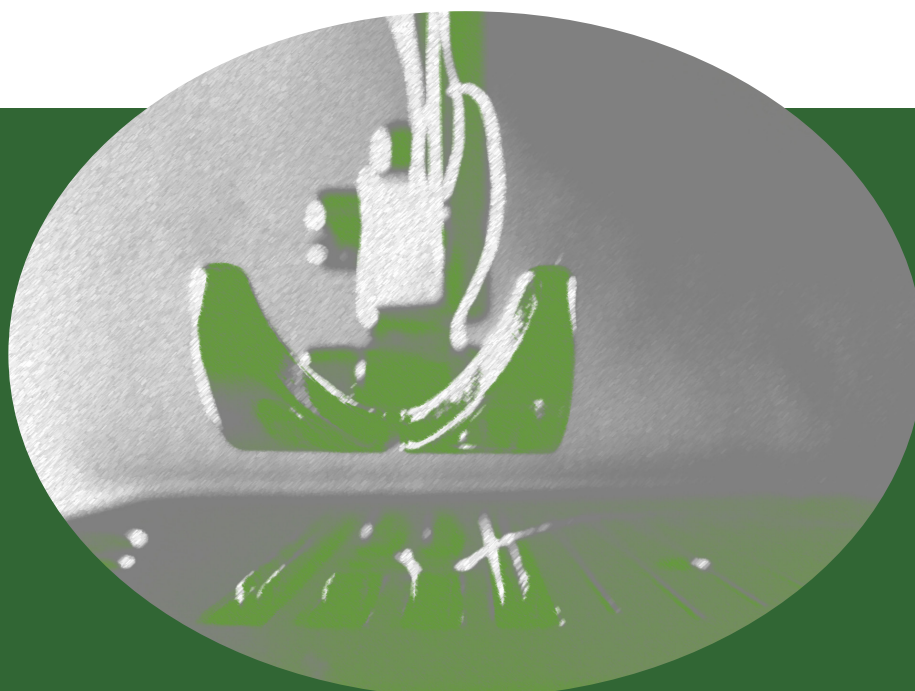
TAPES AND LAMINATES

In order to develop seamseal tapes to make the jackets waterproof several companies in Europe have been contacted, including Sto-nor (loxy) and Dsm Netherlands.

Sto-nor can oly develop tapes if they have a sample of the laminate claiming that a 100 pes seam seal tape is impossible, for they think that the tapes will harden and break after taping.

Dsm has been asked to think about 100% pes laminate and tapes but due to Covid-19 all their laboratories are closed until September 2020.

IBQ is developing together with their supplier a 100% laminate.





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PROJECT LEADER

MODINT, Trade association on fashion, interior, carpet and textile

PROJECT PARTNERS

Groenendijk Bedrijfskleding BV - Netherlands

Wear2Go - Netherlands

Texowear BV - Netherlands

Centexbel - Belgium

C-Tech Innovation Limited - United Kingdom

J&A (International) Ltd - United Kingdom

ANGLES TEXTIL S.A. - Spain

Global Technical Fabrics, S.L - Spain

Association UP-tex Pôle de compétitivité - France