



# Case Study Fabric Process Liner Improvement

The  
Technical  
Textiles  
Specialist



Arville

# Case Study

## Fabric Process Liner Improvement

### ? Background

Arville have introduced a series of cost-saving developments to customers who are using textile process liners in the manufacture of mechanical rubber goods (MRG).

A process/release liner is a material layer, usually applied during the manufacturing or curing process to prevent the outer surface of a rubber product prematurely adhering to itself or other surfaces.

It is common to use a textile-based process liner for rubber products made on an industrial scale for a number of reasons including strength, high temperature resistance, relatively low cost and ease of handling.

The customers were using a particular type of textile process liner which had been specified historically and had remained unchanged for a number of years because of the perceived lack of an alternative in the market. As such, the use of the material had not been reviewed for some time.

Whilst this was not felt to be an immediate 'problem' for the customers, they were conscious of the fact that they were single-sourcing a fabric without having any viable contingency.

### 📌 Project Brief

The key requirements for the customers were:-

- An alternative replacement to their existing fabric with high levels of durability and resistance to wear.
- As the liner was frequently subject to mechanical stresses during the calendaring process, it was important that the fabric would have high tensile strength to withstand constant loads and frequent handling.
- A fabric which would prove to be more cost-effective in the long-term.
- A very high standard of weave for effective pattern transfer without any visible faults.

### 🎯 Solution

Process liners are considered as disposable by-products of a manufacturing process and whilst they are an essential component, they are also perceived as a direct cost and therefore, to a degree, price sensitive. As such we aimed to use our technical experience to develop a suitable alternative which would bring about cost-savings for our customers with a much improved level of durability when compared against the existing fabric already in use.

If successful, this would allow them to use the fabric for much longer periods before having to make changeovers.

Using the information from our database of yarns and weave constructions we proposed to weave a continuous filament (CF) nylon fabric, suitable to accept a specialist release agent which would be applied during the finishing process. The release agent would cause the fabric to maintain its release properties for a much longer period of time with the yarn type and weave construction offering base that was both durable and hard-wearing.

### ✅ Outcome

The fabric performed above our customers' expectations and they were surprised at how easy the process of using our specialist expertise in the development project actually was:

- They were able to re-use the fabric as much as x5 longer before it began to wear out and lose its release properties.
- By reducing the amount of changeovers on the production lines they were able to eliminate downtime and improve their production efficiencies.
- The new fabric reduced the amount of rejected product caused by ineffective release or inconsistent transfer of weave pattern to the rubber surface.
- The customers achieved a significant reduction in their production costs with minimal effort on their part.

To find out more about how we can help with your requirements please contact us T: +44 (0) 1937 582735 or email [sales@arville.com](mailto:sales@arville.com)

## An Integrated Approach To Textile Design

Arville are experts at all areas of the technical textile manufacturing process. Our integrated approach means we can develop highly complex technical textiles, tailoring the yarn types, weave constructions, finishes and coatings to produce fabrics which are custom-made to perform to consistently high standards in even the most demanding of applications.

At the heart of this lies our ability as technical textiles specialists to design the manufacturing processes, which allows us to develop for our customers an end product of high-quality fabric, engineered to have performance characteristics that exactly meet their requirements.

