

CB GROUP PRODUCER OF FUNCTIONAL FILM

Membranes are becoming an important and increasingly valued product group in the textile and construction industries. As far as roof structures and building façades go, the quality of the membrane translates into the proper protection of the attic and the thermal insulation layer of the building against moisture, and ensures higher energy efficiency parameters of the building. The winners on the market of building membranes are companies not only capable of offering a wide range of high quality products at a competitive price, but also able to meet the ever-increasing demands of the market, having a wide range of technological capabilities, such as the production of watertight, breathable functional films. It is the core of a multilayer membrane and to a large extent it determines the quality of the product or its resistance to UV rays.

During the INDEX™20 World's Leading Nonwovens Exhibition in Geneva, CB Group, the Polish manufacturer of roofing membranes and functional film which operates three production facilities in Poland and Germany will present a wide range of high quality vapour-permeable COROTOP® membranes. Wioletta Kopyto, Quality Assurance and R&D Manager, emphasised that they have a key role in sealing pitched roofs and wall structures.



Wioletta Kopyto, Manager B&R.

The functional film layer provides resistance to sunlight (including UV), water permeation, and regulates the balance of water vapour flow through the roofing system.

- Yes, it is the high quality of the breathable inner functional layer that determines the durability of our highly vapour-permeable COROTOP® membranes, both during construction work and when in use.

We have translated 25 years of experience in the construction industry into developing our portfolio. The constant monitoring of the market, its trends, needs of the customers, or products offered by the suppliers motivate us to continuously invest in new technologies and laboratory equipment, and to carry out research and development work on new products. We specialize in the technologies of extrusion of spunbond non-woven fabrics, lamination processes by thermo-bonding or ultrasonic methods, or by gluing with powder or hot melt adhesive. Last year, at CB Group, we launched one of the most modern lines for the production of functional PP/PE films in Europe, using the cast technology (CAST), including a module for longitudinal stretching of the MDO film (Machine Direction Orientation).

By investing in a new, high-performance line for films (with the maximum capacity of 500 kg/h), we have gained the possibility to produce films in various nominal widths (from 1030-1630 mm) or weights (18-70 gsm), but most importantly, we have the ability to optimize the base membrane formula, including the film, and as a result, improve the mechanical properties, UV resistance, watertightness and breathability of the microporous film.

What is the advantage of the longitudinal orientation of the film?

- It represents a milestone in the evolution of the production of breathable films, using the CAST technology - it allows to obtain a function of high vapour permeability and good physical and mechanical parameters, which was not possible using the standard cast process. The gradual transition of the polymer from the amorphous to the crystalline form translates into a number of strength and functional attributes of the three-layer PP/PE film. An innovative solution was used in the production process - raw materials based on PP and PE, with a significant admixture of chalk filler, form a vapour-permeable material with billions of micropores connected with one another in a network structure, as a result of longitudinal stretching.

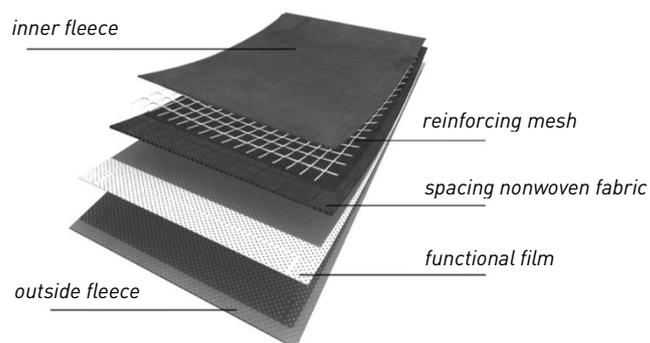
The module for stretching of the produced film (MDO) allows to control the size of micropores within the range of 0.5-10 μ m, in order for them to be permeable for water vapour molecules (0.0004 μ m), but to become a barrier for larger water molecules (200-2500 μ m). For a film to be fully functional, it must also be free of any manufacturing defects, pine-holes, foreign body inclusions, or clumps. We automatically adjust the profile and thickness of the cast and then stretched film, but we are also capable of in-line control of the quality of each square millimetre of film, using high resolution video cameras. We are diversifying our products, among other things, by increasing their resistance to harmful radiation, in order to be able to introduce them to foreign markets, where climate is more severe than moderate, with a high UV index.



Cutting a functional film sample



Film strength test



Layers in the membrane