

Multifunctional membrane makes a bestseller

We met the complex requirements for ski skins with a multifunctional self-adhesive membrane. What's more, the solution we developed made IBEX's product the benchmark in its field and thus a bestseller.

Ski skins have been around for over 100 years. Over the course of time, the materials have been optimised again and again. Two years ago, a multifunctional membrane took this popular climbing aid for touring skiers to a new level. The project is also interesting for other application areas of multifunctional membranes, e.g. for sealing purposes. It shows the wide range of requirements that can be met with such material solutions. In this case, the membrane had to be above all waterproof. Conventional ski skins with cotton laminate carriers become saturated with water, which increases their weight and lowers the performance when climbing. The self-adhesive function is also crucial to performance.

An optimum adhesive was sought which would allow the skin to be peeled off the ski base and stowed in a rucksack for the descent and then be reapplied to the skis for the ascent, without any loss of adhesive bond. Another key requirement was that the laminating film, which forms the underside of the ski skin, should be light and thin yet tear resistant. It had to be possible to bond it to a fabric made of cotton and mohair, which ensures the right adhesion under very high loads and across a temperature range of -30 °C to +60 °C.



Multifunctional membranes, which have made a benchmark solution for ski skins possible, can also be used for many industrial applications. (Photo: Kohla)

The new approach was trial tested using our sample materials. The project was initiated with a search for a very thin membrane onto which various materials could be bonded. "We carried out performance tests and bonding trials with these membranes. In this way, all the key parameters for such a solid investigation project were defined", explains Daniel Stern, Product Manager at IBEX. Once it was determined that the new concept held great promise, the design was readied for serial production, through working in partnership and supported by many laboratory examinations and tests. Because developing customer-specific products is what we do, the time-to-market for a project of this complexity was short. Already by 2021, the market share of IBEX ski skins rose significantly with this new solution.

In addition to the many user benefits, it has also become evident that the solution offers further advantages in terms of sustainability.

All values given are average values and do not represent minimum or maximum values. Users must test suitability for their specific application.