



Extra glossy and eco-friendly

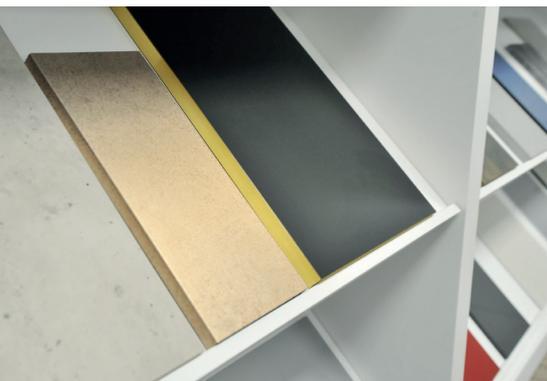
Prem Line's high-gloss surfaces are well-known in the RV world. The Italian furniture style expressed through PET technology

Words Renato Antonini, photo Enrico Bona

Prem Line is celebrating its first 15 years of business in 2021. It is a relatively young company that has established a name for itself for its high-quality products and especially for the tenacity with which it has perfected the initial idea of using PET in the furniture industry for the finishing of

panels. Industrially developed in 1941, PET (polyethylene terephthalate) is a polymer widely used worldwide for applications in the medical and in food packaging sectors (water bottles and containers for fruit and vegetables). Prem Line's founder Vanni Pedron introduced PET to the furniture industry for the first time on a global scale in 2006, fully convinced of the validity of what is essentially an eco-friendly material. When disposed of

by incineration, PET releases only water, oxygen and carbon dioxide into the air, due to its chemical structure based on oxygen (O), hydrogen (H) and carbon (C) molecules. Today, the company management has passed into the hands of the founder's children, Laura and Stefano, but on closer inspection, the winning idea that started the business remains in the name Prem, that stands for "Pedron Rivestimento Ecologico Mobili" (Pedron





ecological furniture coatings).

"PET is an environmentally friendly material", said Laura Pedron, Sales Director and CEO of Prem Line. "It can be recycled and it has always been used for medical and food packaging. We were the first to introduce this technology in Italy in the furniture sector as a material and on processing level in 2006. We have also successfully introduced PET to the RV sector, where we entered in 2012."

Prem Line is today one of the leading companies in the production of PET decorative surfaces and its products are exported worldwide. Although Prem Line does not sell directly to RV builders, it is well established in the industry, especially in the German, UK, US and Australian markets. The extremely high-gloss Dialux® finish has become very popular over recent years.

Plant and production processes

The PET sheets used to coat the furniture panels are made by extrusion and are protected by a nanotechnological process to make them scratch- and solvent-resistant. Products with a glossy or matte surface show consistency over time without changing colour as the result of UV exposure. All production processes are carried out in the company. The plant, which employs 20 people, covers an area of 10,000 square meters and is located in Friuli Venezia Giulia, in the North East of Italy.

The first step of the process is to make the PET sheet onto which the paper décor of the customer's choice is applied. This production technique enhances the aesthetic qualities of the decoration (by creating an extra-glossy or extra-matt finish) as well as its technical properties, increasing its surface resistance. Finally, it is coupled with the support panel. MDF (medium-density fibreboard) is generally both for the furniture sector and for the RV sector, but other types of materials can also be employed.

"The panel production process begins with the cutting of the support to create the right size", explained Laura Pedron. "Then, the material is sanded because you need a perfectly flat support, without imperfections, above all to create the glossy finish. After sanding, we move on to the calender, where the décor (paper+PET) is applied to the panel by means of hot polyurethane gluing. We have two calenders to coat the panels. One is dedicated to the planar coating of panels with a maximum width of 1280mm, the other dedicated to the coating of post-forming elements such as handles or special profiles".

Using a hot-rolling polyester PET sheet technique (PET-Prem™), the company produces



both panels and finished elements. There are many possible processes, starting with the treatment of the edges. In addition to the classic edging, post-forming coating of the edges made during the sheet application phase is also possible. On request, we can also carry out folding operations for the folding of the panel (with 45° etching on the back of the support), as well as milling and drilling according to drawing with numerical control machines, for example to create recesses for handles and hinges.

Dialux , Supermat+ and Supermat+ Plus

"PET surfaces are our core business, our original product" said Laura Pedron, Sale Director and CEO of Prem Line. "We have three product lines. Dialux® is our workhorse with an extra-glossy finish, but in recent times we have introduced the Supermat+® and Supermat+® Plus matte finishes to meet the trends in the furniture industry. For the RV sector, most of the requests are still for the glossy finish, but matte finishes are starting to become more popular and we are ready to provide a high-quality product."

- Dialux® - Extremely high-gloss surfaces, for high impact furniture: an exceptional gloss of 96/100 gloss is achieved. By using a nano-technological treatment, the product is remarkably scratch-resistant for easy cleaning and heavy-duty use conditions. Durability is guaranteed. It also has a high resistance to chemicals and solvents. The surface does not undergo colour changes over time and has excellent resistance to UV rays.
- Supermat+® - Extremely matt surfaces, with very low light reflection (< 6 gloss), with a characteristic velvety effect noticeable to the touch. By using a nano-technological treatment, the product is remarkably resistant to scratches, chemicals and UV rays.
- Supermat+® Plus - Evolution of Supermat+®, offers even matter surfaces (extra opaque, very low reflectivity, < 3 gloss) and is completely smudge-proof.

Premcycle

To offer an even more ecological product, Prem Line has created Premcycle, a recycled PET surface. Premcycle is made using a part of PET already used for other purposes (water bottles). Once ground, the material is introduced into the new PET composition. This is Prem Line's response to the great debate on sustainable design, with the aim of reducing the negative effects of industrial production in terms of pollution and waste disposal. The recycling of food-grade PET bottles is well established. Prem Line decided to follow the same principle for the creation of PET furniture surfaces.



Digital printing and customised product

As far as the decoration is concerned, in the RV sector, today wood is appreciated, but also white and ivory plain colours. For the decoration, Prem Line generally receives the paper from the customer, but the digital printing process can independently produce various types of designs.

"Digital printing means we can satisfy the most diverse requests and work even on small batches, with a minimum quantity of 500 square metres to meet the needs of RV manufacturers who want to produce small series of vehicles", explained Laura Pedron. "We are open to various product customisation solutions".

