



Divinycell PX gives Carmenta a durable touch of luxury

Carmenta is an Italian leader in the production of upscale bathroom and spa furniture. The company's luxurious designs can be found not only at hotels and resorts, but also in exclusive homes and large yachts. At the heart of the designs are Divinycell PX cores from Diab.

Carmenta's stylish furniture offering is as easily tailored as it is distinctive. Often working in partnership with design or architecture studios, the company is frequently involved in specific projects for specific customers. Composite materials play a key role in many of Carmenta's products, where they provide a customizable balance of weight, mechanical resistance, insulation and aesthetic characteristics.

Among Carmenta's successful design ranges is the Dream Collection, which is primarily intended for spas and wellness centers. Included in this range are two types of products based on *Divinycell PX* cores from Diab: sauna cabins and chaise longue chairs.

For the saunas, Carmenta uses two different types of *Divinycell PX*. The sauna plates are created with PX 150, which is worked with a CNC machine then covered with plastic layers and bonded with epoxy resins. For the sauna walls, Carmenta uses 20 mm PX 60, which is bonded with epoxy resin to external layers of plastic or wood laminate.

PX 60 and epoxy resins are also used in the chaise longue chairs, where wood laminates are bonded to a PX 60 core. However, the process of creating the chairs is somewhat unusual.

To achieve the special shape of the chaise longues and their particular radius, 10 mm sheets of PX 60 are first thermoformed with a press, which exposes them to 180-200°C for around

20 minutes. The sheets are then formed with a frame press, after which three of them are bonded together with epoxy resin. Though the process is time consuming, it is easier than thermoforming a 30 mm sheet of PX 60. Moreover, the three-layer core with its epoxy resin layers offers higher mechanical properties than a standard PX 60 sheet.

Behind Carmenta's choice of *Divinycell PX* is the core's high compression strength and unique combination of performance characteristics. *Divinycell PX* resists detachment better than a normal PU core, providing a high tolerance for temperature and humidity that is especially critical in the sauna cabin. It is also easy to shape with a CNC machine, and its suitability for recycling gives it a lower environmental impact than that of PU.

With *Divinycell PX* as a basis for its composites, Carmenta has a flexible foundation for a wide range of products, including thermal and acoustic insulation panels. The core's mechanical properties and low specific weight give the company ample opportunities to meet design requirements, no matter how demanding or exclusive the application.

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