

Case study

Sports bow made from stress-resistant Pocan® T 7331



Figure 1 “Black Initech” sports bow

The sports equipment company **Decathlon®** was founded in 1976 with the aim of making outdoor sports more enjoyable for everyday people. One of the brands that Decathlon® markets is **GEOLOGIC**, which comprises products for anglers, hunters and serious archers. For the past 10 years 60 enthusiasts from these disciplines have been striving to ensure that **GEOLOGIC**'s products meet the demands of their users – under all possible conditions.

Material: Pocan® T 7331
(Center section)
Manufacturer: Ere Plastique
OEM: GEOLOGIC – Decathlon, France

One such product is the “Black Initech” sports bow shown in figure 1.

The center section of this bow, in particular the handle, must not distort under changes of load as this will result in the arrow not traveling straight. Previously Decathlon had made use of glass fiber reinforced polyamide 66 for this component, however in order to further improve the shooting accuracy of

their bows, they searched for a material that displayed even higher stiffness and load-bearing capacity under all possible climatic conditions. Pocan® T 7331 proved to be such a material. At 10,500 MPa, the modulus of elasticity – a measure of stiffness – of this high-tech plastic is around 75 % higher than that of a comparable PA 66. The mate-

rial has good dynamic properties and a low tendency to warp. An additional benefit of Pocan® T 7331 is its good surface quality, which enhances not only the functionality of the ergonomically designed center section of the bow, but also makes it attractive to look at.

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