

### **carbon fibres type IM**

Carbon fibres type IM (intermediate modulus) are related to *carbon fibres type HT* because of the comparable values of tensile strength, but are characterized by greater stiffness (Young's modulus up to approximately 35% of the theoretical  $C_{11}$  value).

Notes:

The tensile modulus (Young's modulus) varies between *ca.* 275 and 350 GPa, but the disposition of the boundaries is somewhat arbitrary. The relatively high ratio of tensile strength to tensile modulus, typically above  $1 \times 10^{-2}$ , in carbon fibres type IM, in spite of an increase of Young's modulus, requires a further increase of strength, which is achievable by a significant reduction of the monofilament diameter down to about 5  $\mu\text{m}$ . Such small filament diameters are typical of carbon fibres type IM.

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