

## 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).

Note:

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.

**Source:**

PAC, 1995, 67, 473 (*Recommended terminology for the description of carbon as a solid (IUPAC Recommendations 1995)*) on page 482