

Creep resistance and high temperature strength of poly(p-xylylene) fibers

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Abstract

High-strength and high-modulus poly(p-xylylene) (PPX) fibers show no creep at room temperature and retain at 200°C, in air or in nitrogen atmosphere, still 50 to 60% of their tensile strengths at room temperature, whereas the modulus does not change. In stress relaxation experiments PPX fibers have relaxed after 17.4 hours less than 4% of the initial stress whereas during the same period of time polyethylene fibers relax over 75% of the initial stress.

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