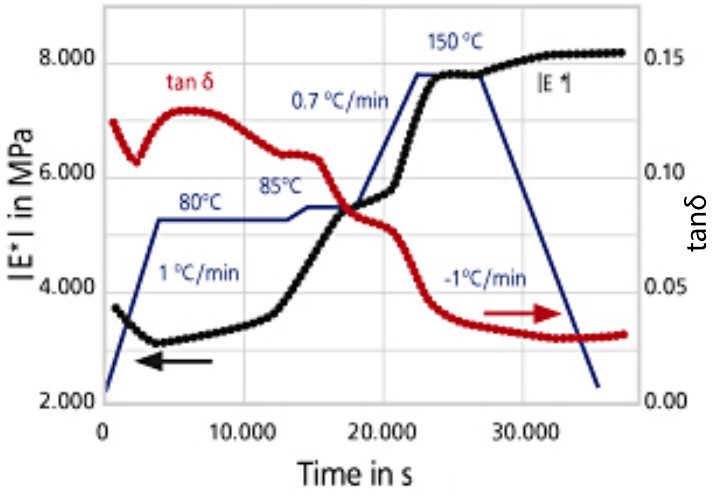
APPLICATION**SHEET**

Composites – DMA EPLEXOR®

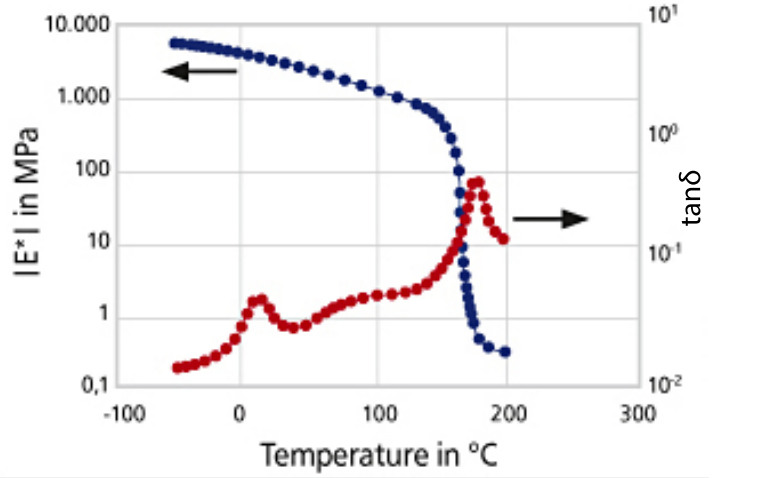
Curing Process of a Prepreg

E' and tanδ of a composite (prepreg) are shown going through the curing process. Using the segment program, the user can perform complex annealing, heating and cooling regimes to investigate curing processes of composites by following the changes in visco-elastic behavior. During the entire curing cycle, the modulus is doubled from 4000 MPa to 8000 MPa.



Temperature Dependence of a Reinforced Polymer (Composite) – Measured in Tension

The figure shows the complex modulus |E*| and the loss factor tanδ of a glass fiber-reinforced polymer system as a function of temperature. At approx. 10°C, the polymer matrix shows a phase transition, whereas the glass transition can be observed at approx. 170°C (tanδ peak). The modulus drops down about more than four orders of magnitude. The heating rate was 2 K/min with a test frequency of 10 Hz.



NGB · Application Sheet 269 · EN · 08/17 · Technical specifications are subject to change.

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