

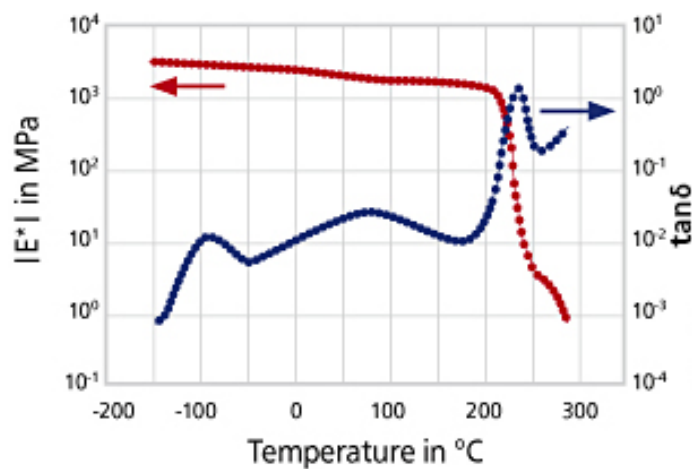
# APPLICATION SHEET

## Polymers – DMA EPLEXOR®

### Temperature Dependence of Polyetherimide (PEI)

This figure shows the course of the complex elasticity modulus and the visco-elastic damping  $\tan\delta$  in dependence of the temperature. The marked modulus decline for about 4 decades during the glass transition, starting at 215°C, is

particularly significant. Here, the material begins to flow. From the low-temperature region (-150°C) up to temperatures above the glass transition, damping increases by 3 orders of magnitude. Material changes from solid to liquid are detectable by this technique.



### Testing of a Polymer Blend

The figure shows the complex modulus of elasticity and damping of a polymer blend. Noticeable here is the

continuous decrease in the complex modulus of elasticity with temperature. The line shape of the  $\tan\delta$  dependence on the temperature shows phase transitions at -90°C, 0°C and 100°C.

