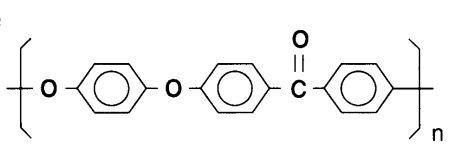


DMA No. 10 MAY.1991

Dynamic Viscoelastic Data of Polyetheretherketone

1. Sample Polyetheretherketone : PEEK
 (Brand Name : Victrex 450G)

2. Chemical Structure



3. Thermal History Press film ; after pressing at 380 , allowed to cool to room temperature.

4. Instruments SDM5600 Rheol. Station
 DMS200 Dynamic Mechanical Spectrometer

5. Conditions Deformation mode : Tensile mode
 Sample Size : 20.00(ℓ) × 1.15(w) × 0.50(t)mm
 Temperature Range : -150 ~ 340
 Heating Rate : 1K/min
 Atmosphere : N₂
 Frequency : 0.5,1,2,5,10Hz

6. Transition temperature and activation energy based on tanδ

| | Transition Temperature () | ΔEa (kJ/mol) | Comments |
|--------------|----------------------------|--------------|------------------|
| α Transition | 114 (1Hz) | 788 | Glass Transition |
| β Transition | 72 (1Hz) | - | |
| γ Transition | -95 (1Hz) | 51 | |

7. Thermal Analysis Data

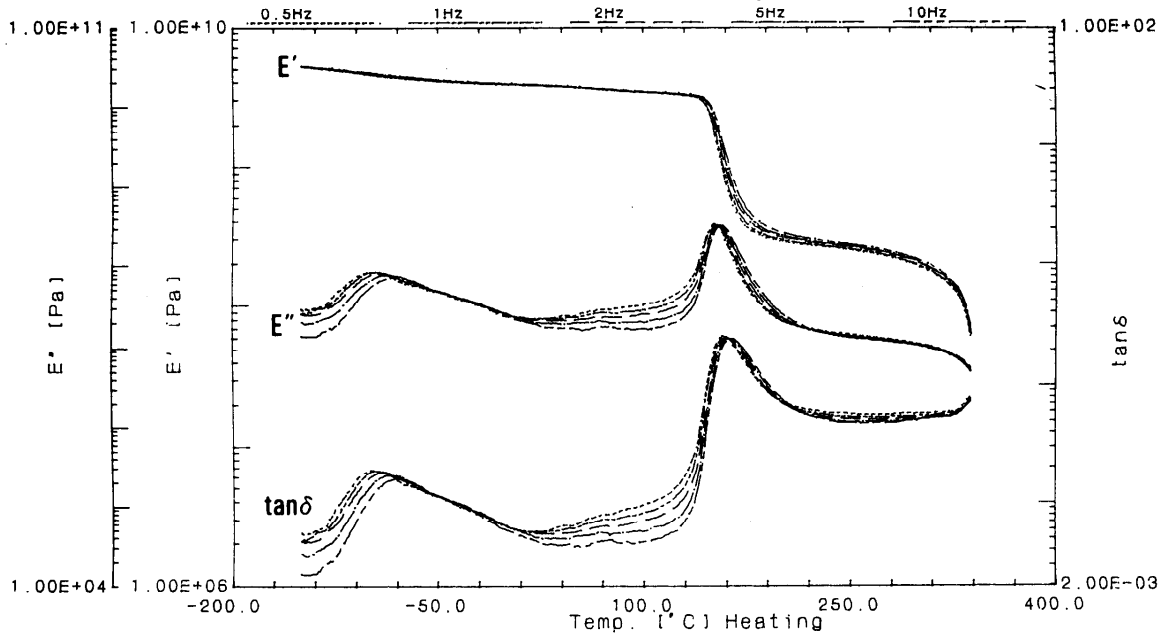
1st run Tg : 139.3 , ΔCp : 0.113 J/deg·g
 Tc : 174.7 , ΔHc : 1.0 J/g
 Tm : 338.6 , ΔHm : 42.0 J/g

2nd run Tg : 144.0 , ΔCp : 0.279 J/deg·g
 (Quenched Sample) Tc : 176.1 , ΔHc : 27.5 J/g
 Tm : 338.7 , ΔHm : 42.1 J/g

DSC 10K/min

DMS

Name:
 Date: 91/04/17 09:45
 Comment: 1°C/min
 Sample: PEEK
 Temp. mode: Ramp
 Deform: Tension
 1*s: 20.000 mm * 0.575 mm2
 Frequency: 0.5 ~ 10 Hz



DMS

Name:
 Date: 91/04/17 09:45
 Comment: 1°C/min
 Sample: PEEK
 Temp. mode: Ramp
 Deform: Tension
 1*s: 20.000 mm * 0.575 mm2
 Frequency: 0.5 ~ 10 Hz

