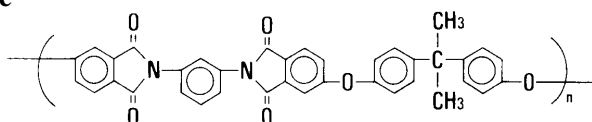


DMA No. 1 APR.1989

Dynamic Viscoelastic Data of Polyetherimide

1. Sample Polyetherimide
 (Brand Name : ULTEM)

2. Chemical Structure



3. Thermal History Press film ; after pressing at 280 , quenched in ice water.
 Dried in a vacuum at room temperature for 1 week.

4. Instruments SDM5500 Rheol. Station
 DMS100 Dynamic Mechanical Spectrometer

5. Conditions Deformation mode : Bending mode
 Sample Size : 20.00(ℓ) × 10.00(w) × 1.24(t)mm
 Temperature Range : -150 ~ 270
 Heating Rate : 2K/min
 Atmosphere : N₂
 Frequency : 1,2,5,10Hz

6. Transition temperature and activation energy based on tanδ

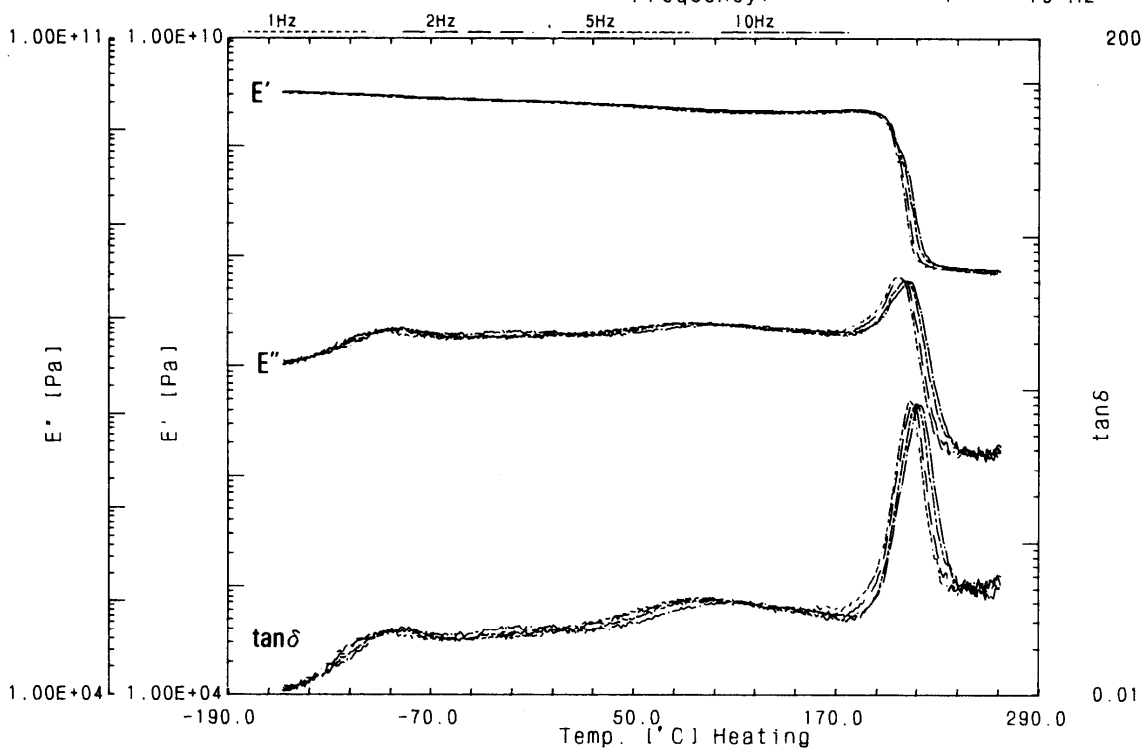
| | Transition Temperature () | ΔEa (kJ/mol) | Comments |
|--------------|----------------------------|--------------|------------------|
| α Transition | 214 (1Hz) | 777 | Glass Transition |
| β Transition | 90 (1Hz) | 95 | |
| γ Transition | -98 (1Hz) | 44 | |

7. Thermal Analysis Data

T_g : 212.9 , ΔC_p : 0.259 J/deg·g, DSC 10K/min

DMS

Name: Sample: PEI
 Date: 88/08/18 10:55 Temp: mode: Ramp
 Comment: 2°C/min Deform: Flexure rec.
 1*w*t: 20.000* 10.000* 1.240 mm
 Frequency: 1 ~ 10 Hz



DMS

Name: Sample: PEI
 Date: 88/08/18 10:55 Temp: mode: Ramp
 Comment: 2°C/min Deform: Flexure rec.
 1*w*t: 20.000* 10.000* 1.240 mm
 Frequency: 1 ~ 10 Hz

