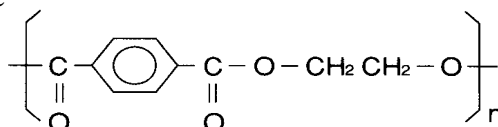


DMA No. 9 MAY.1991

Dynamic Viscoelastic Data of Polyethyleneterephthalate

1. Sample Polyethyleneterephthalate : PET
 (Brand Name : S-Type film, biaxially oriented)

2. Chemical Structure



3. Thermal History Annealed at 130 for 1 hour.

4. Instruments SDM5600 Rheol. Station
 DMS200 Dynamic Mechanical Spectrometer

5. Conditions
 Deformation mode : Tensile mode
 Sample Size : 10.00(ℓ) × 10.00(w) × 0.01(t)mm
 Temperature Range : -150 ~ 220
 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)	398	Glass Transition
β Transition	-70 (1Hz)	76	Local mode relaxation

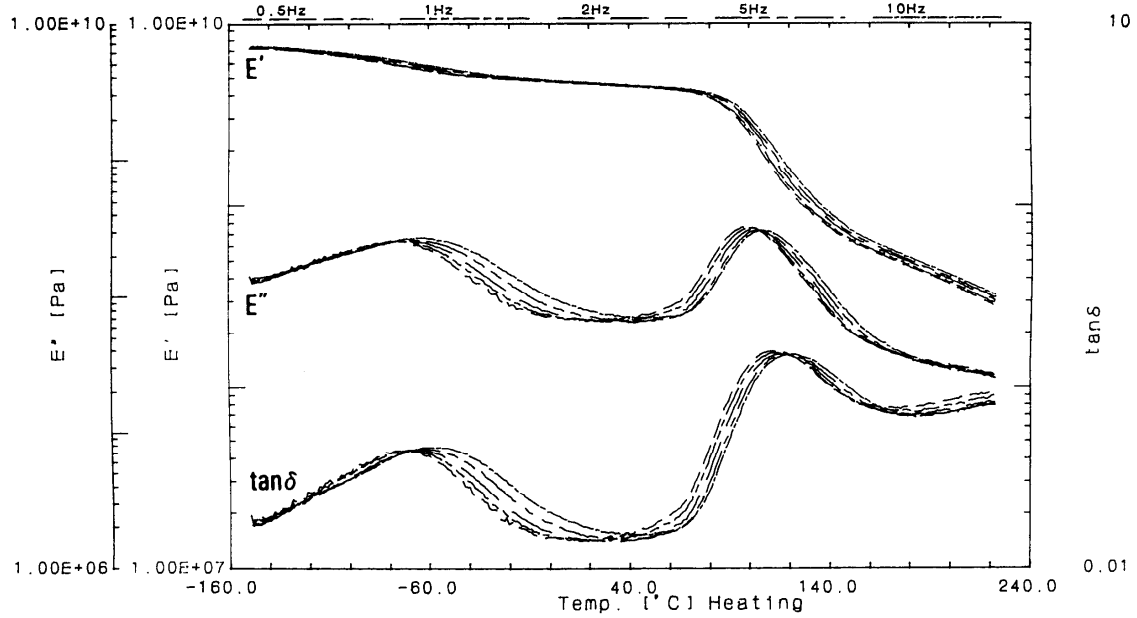
7. Thermal Analysis Data

Annealed Sample (1st run) T_m : 257.7 , ΔH_m : 61.0 J/g
 Quenched Sample (2nd run) T_g : 76.5 , ΔC_p : 0.377 J/deg·g
 T_c : 134.0 , ΔH_c : 37.9 J/g
 T_m : 257.5 , ΔH_m : 51.3 J/g

DSC 10K/min

DMS

Name: Sample: PET film
 Date: 91/03/27 21:21 Temp. mode: Ramp
 Comment: 1°C/min Deform: Tension
 1*s: 10.000 mm * 0.100 mm2
 Frequency: 0.5 ~ 10 Hz



DMS

Name: Sample: PET film
 Date: 91/03/27 21:21 Temp. mode: Ramp
 Comment: 1°C/min Deform: Tension
 1*s: 10.000 mm * 0.100 mm2
 Frequency: 0.5 ~ 10 Hz

