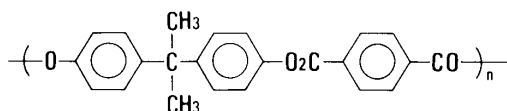


DMA No. 2 APR.1989

Dynamic Viscoelastic Data of Polyarylate

1. Sample Polyarylate
 (Brand Name : U-polymer)

2. Chemical Structure



3. Thermal History Press film ; after pressing at 250 , quenched in ice water.
 Dried in a vacuum at room temperature.

4. Instruments SDM5500 Rheol. Station
 DMS100 Dynamic Mechanical Spectrometer

5. Conditions Deformation mode : Bending mode
 Sample Size : 8.00(ℓ) × 10.10(w) × 0.70(t)mm
 Temperature Range : -150 ~ 260
 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	189 (1Hz)	581	Glass Transition
β Transition* ¹	95 (1Hz)* ²	-	
γ Transition	-77 (1Hz)	79	

* 1 tanδ is observed as the peak shoulder of α transition peak.

* 2 E'' is observed as an independent peak. The value is E'' peak temperature.

7. Thermal Analysis Data

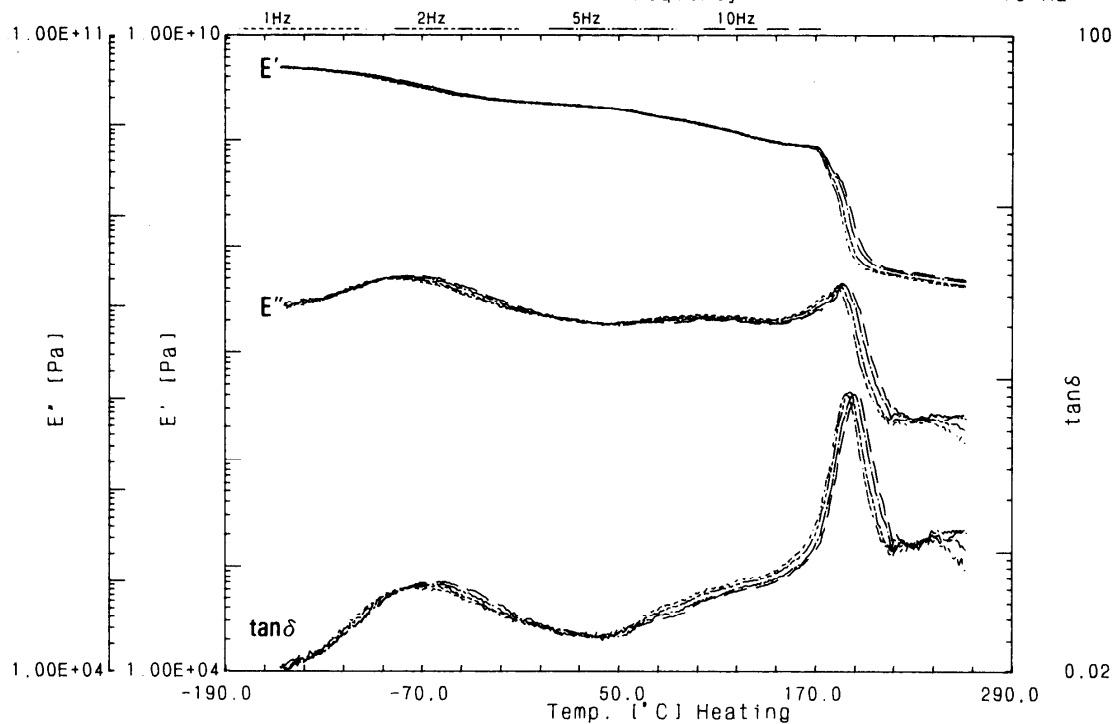
T_g : 182.6 , ΔC_p : 0.175 J/deg•g, DSC 10K/min

8. Literature (Concerning this sample)

T.Sasuga, N.Hayakawa and K.Yoshida, J. Polym. Sci. Polym. Ed., 22, 529-533(1984)

DMS

Name: Sample: PAR
 Date: 88/08/30 18:38 Temp. mode: Ramp
 Comment: 2°C/min Deform: Flexure rec.
 ----- 1*w*t: 8.000* 10.100* 0.700 mm
 ----- Frequency: 1 ~ 10 Hz



DMS

Name: Sample: PAR
 Date: 88/08/30 18:38 Temp. mode: Ramp
 Comment: 2°C/min Deform: Flexure rec.
 ----- 1*w*t: 8.000* 10.100* 0.700 mm
 ----- Frequency: 1 ~ 10 Hz

