



## 6. Epoxy Resin Cure

**Instrument:** Tritec 2000 Dynamic Mechanical Analyser

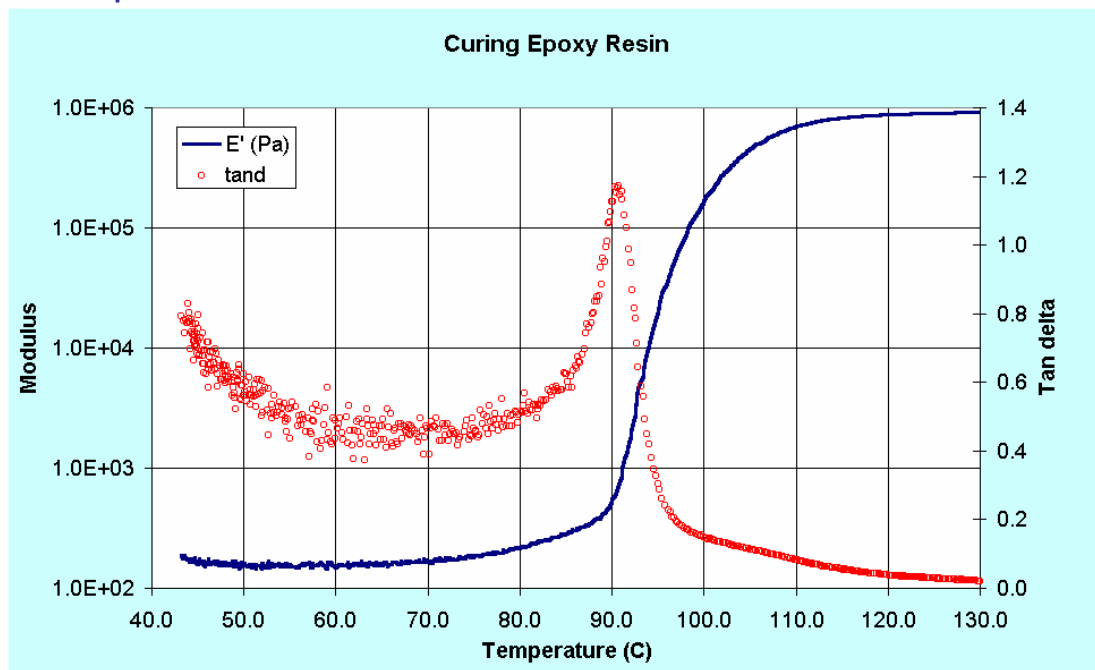
**Sample:** Epoxy Resin

**Geometry:** Shear

**%RMS strain:** 0.97

**Frequencies (Hz):** 1.0

**Thermal profile:** 2°C/minute to 130°C



### Comments:

This data was obtained using shear geometry. Liquid resin was placed between the shear studs and plate such that all the intervening space was filled by the resin. The sample was then heated slowly at 2°C/min to 130°C. The plot below shows the relationship of noise to tan delta particularly at a low modulus. Even though the tan delta data is relatively noisy between 60° and 75°C, it is clear that the modulus information is relevant and acceptable at the very low values being measured (100Pa). This would be considered 'borderline' at the soft end of the instrument's performance.

The sample below starts to quickly cure around 90°C with a maximum rate of cure around 95°C.

This material takes several hours before full cure is achieved at ambient and at least one hour at 100°C.