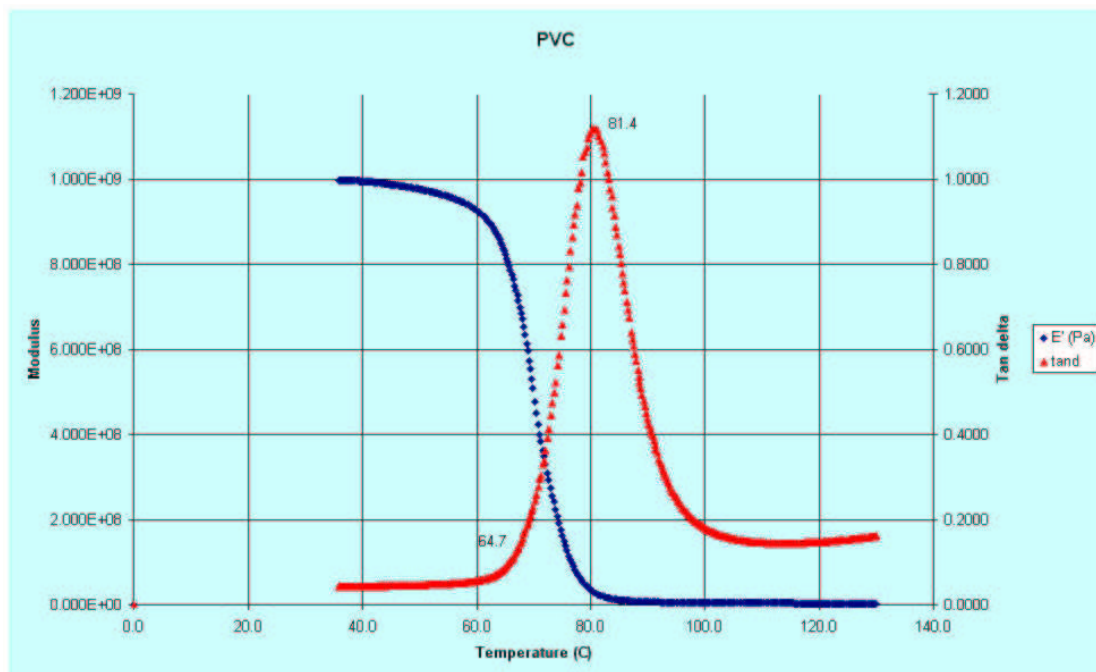




## 5. PVC sheet material

**Instrument:** Tritec 2000 Dynamic Mechanical Analyser  
**Sample:** PVC Sheeting  
**Geometry:** Single Cantilevered Bending  
**%RMS strain:** 0.0115  
**Frequencies (Hz):** 1.0  
**Thermal profile:** 2°C/minute to 80°C



### Comments:

This experiment illustrates the typical mode that most DMA experiments are conducted using a single frequency thermal sweep.

This gives very accurate and reproducible information about the glass transition temperature of the material via the  $\tan\delta$  data. As  $\tan\delta$  is a ratio of the storage and loss components, it possesses no units and is therefore correct regardless of geometry. The only consideration is the heating rate of the sample in the thermal environment of the oven. It is generally accepted that with polymeric materials of between 1 and 2g, it is unwise to heat faster than 1 or 2°C/min if a sensible temperature value for  $\tan\delta$  max. is to be obtained.

An indication of the typical range of modulus from the glassy state right up to onset of melt or degradation will simultaneously be obtained from the raw data and is presented here.

Loss moduli ( $E''$  or  $G''$ ) can also easily be presented if required.

All the data above is 'raw data' with no smoothing. No corrections for clamping errors have been used.