

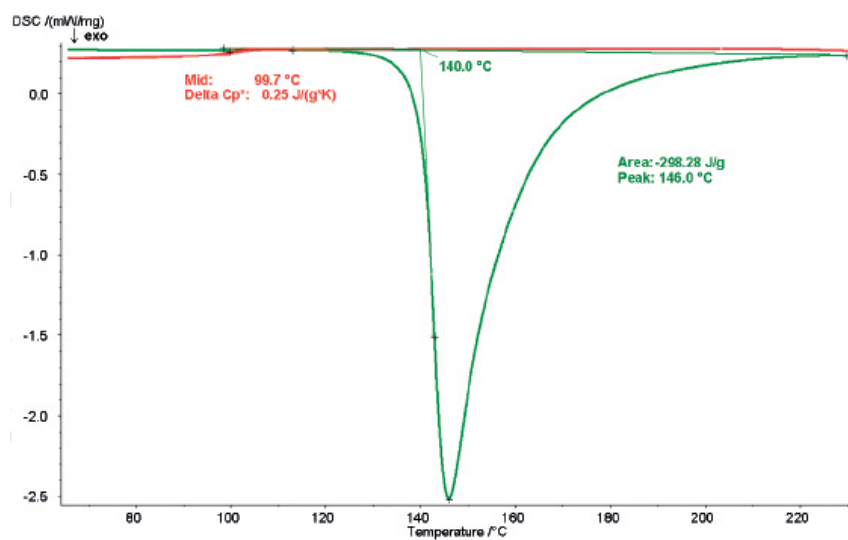
APPLICATION SHEET

Adhesives – DSC 214 Polyma

Ideal Curing of Reactive Adhesives

Both the thermal and the UV-curing of 1C or 2C adhesives can be characterized reliably with DSC and Dielectric Analysis (DEA). Kinetic analysis of the measurement data allows the activation energy for the curing reaction

to be determined. In addition, computer simulations can help generate a suitable reaction model for your optimum process conditions and determine the optimum degree of curing.



Measurement with the DSC 214 Polyma using an Al pan in an N₂ atmosphere, heating rate 10 K/min

The DSC curve of the 1st heating (green curve) shows the exothermal curing of a 2C epoxy resin adhesive, which begins at approx. 120°C and releases a heat of reaction of 298 J/g. The 2nd heating (red curve) yields the glass

transition temperature of the cross-linked adhesive at 99°C. No further exothermal peak can be detected since curing was totally measured in the 1st heating.