

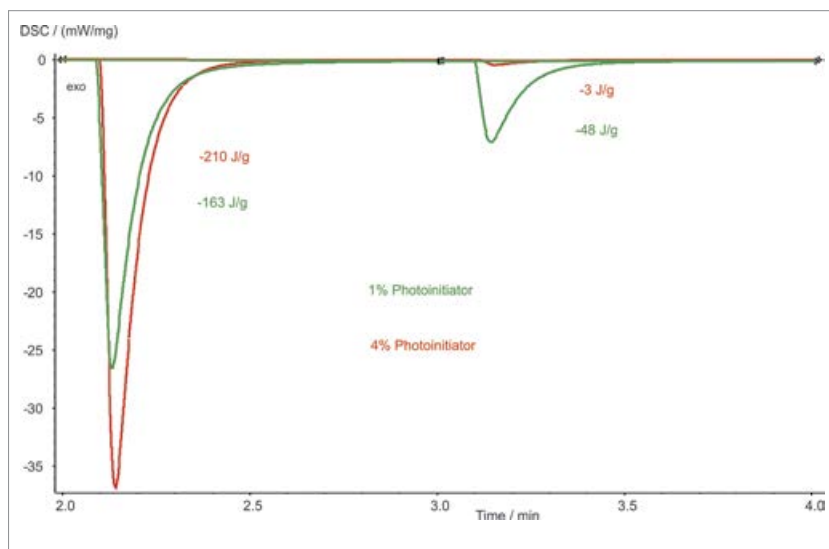
# APPLICATION SHEET

## POLYMERS – ADHESIVES

### ACRYLIC RESIN

Acrylic resins are a group of related substances derived from acrylic acid or methacrylic acid noted for their rubbery nature. The most significant acrylic resin is polymethylacrylate, which is used in an emulsed form for lacquer, textile

finishes, adhesives and, mixed with clay, to gloss paper. One of the main characteristic features of acrylic resin is its high transparency. Acrylic resins can be cured upon to UV or visible light of the proper wavelength, intensity and duration.



#### Instrument

Photo DSC 204 **F1 Phoenix**<sup>®</sup>

#### Test Conditions

Temperature range	25°C isothermal
Heating/cooling rates	0 K/min
Sample mass	approx. 16 mg
Atmosphere	Nitrogen at 20 ml/min
Crucible	Aluminum, open
UV Device	Delolux 04
Radiation time	2 s (three times)

#### Results

The reaction enthalpy was calculated from the signal of the first and second radiation process, each corrected by the third one (baseline). The exothermic peaks during the measurements are due to curing of the resins and show the influence of the photoinitiator amount on the reaction. The resin with 4% photoinitiator reacts faster than the one with 1% photoinitiator during the first exposition (210 J/g to 163 J/g). Both samples finish curing during the second exposure. The total enthalpy is comparable for both resins (approx. 212 J/g).