

# APPLICATION SHEET

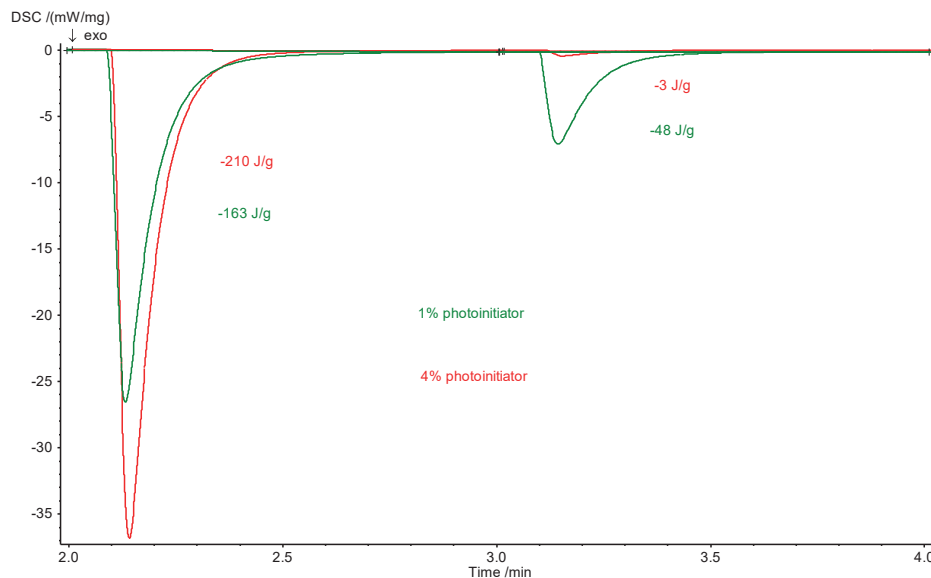
Polymers · Adhesives  
DSC 214 Polyma

## Acrylic Resin

### Introduction

Acrylic resins are a group of related substances derived from acrylic acid or methacrylic acid noted for their rubber 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.



### Test Conditions

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

### Test 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 for the two resins is comparable (approx. 212 J/g).