

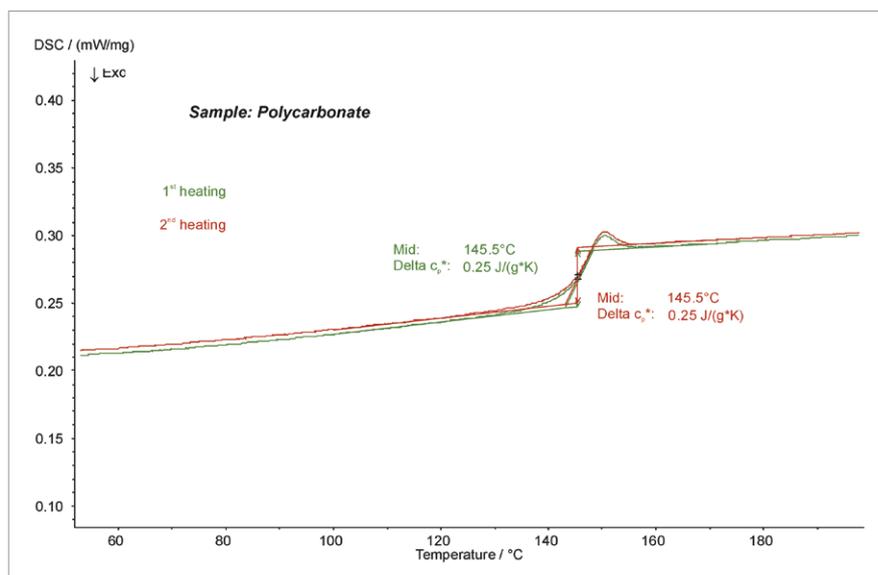
APPLICATION SHEET

POLYMERS – AUTOMOTIVE

POLYCARBONATE

Polycarbonates are a particular group of thermoplastics. They are easily worked, molded, and thermoformed; as such, these plastics are very widely used in modern manufacturing. The most common type of polycarbonate plastic is one made from Bisphenol A, in which groups from

Bisphenol A are linked together by carbonate groups in a polymer chain. This polymer is highly transparent to visible light and has better light transmission characteristics than many kinds of inorganic glasses.



Instrument

DSC 200 **F3** Maia®

Test Conditions

Temperature range	25 ... 200 ... 25 ... 200°C
Heating rates	10 K/min
Atmosphere	Nitrogen at 20 ml/min
Sample mass	9.86 mg
Crucible	Al, pierced lid

Results

In both heatings, an endothermic step at 145.5°C (middle-point) with a change in specific heat of 0.25 J/(g*K) was detected. It is due to the glass transition of polycarbonate. The increase in the measured specific heat flow rate outside the transition range is due to the increase in specific heat of the material versus temperature.