

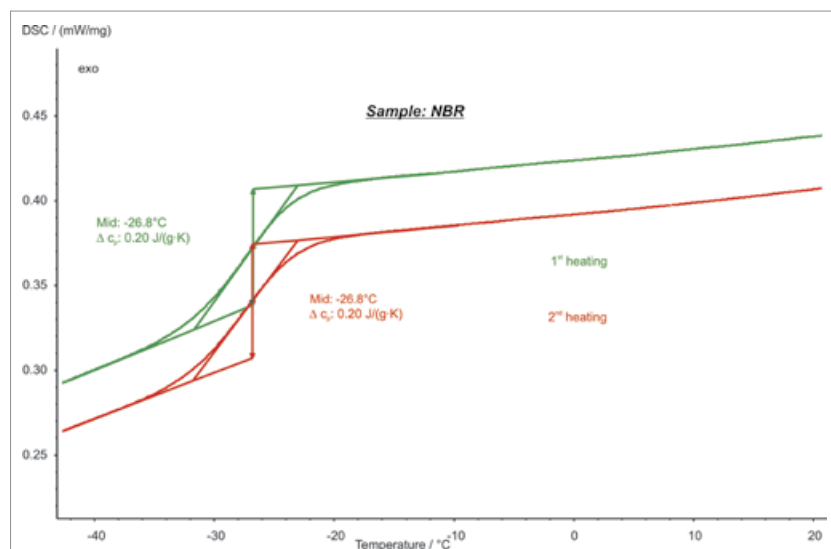
# APPLICATION SHEET

POLYMERS – AUTOMOTIVE

## NITRILE BUTADIENE RUBBER (NBR)

NBR or Nitrile Butadiene Rubber is a copolymer of acrylonitrile and butadiene. The acrylonitrile amount is generally between 18 and 50% and has a great influence on the swelling resistance, elasticity, gas permeability and flex-

ibility at low temperatures of the elastomer. The flexibility at low temperature gets worse when the acrylonitrile amount increases. An important property for automotive applications is the glass transition temperature of NBR.



### Instrument

DSC 204 **F1** Phoenix®

### Test Conditions

Temperature range	-60 ... 25°C (twice)
Heating rate	20 K/min
Atmosphere	Nitrogen at 20 ml/min
Sample mass	13.50 mg
Crucible	Al, pierced lid

### Results

The endothermic change in specific heat detected at -26.8°C (midpoint) in both heatings results from the glass transition of the elastomer.