

Natural Rubber / Ethylene Propylene Diene Rubber

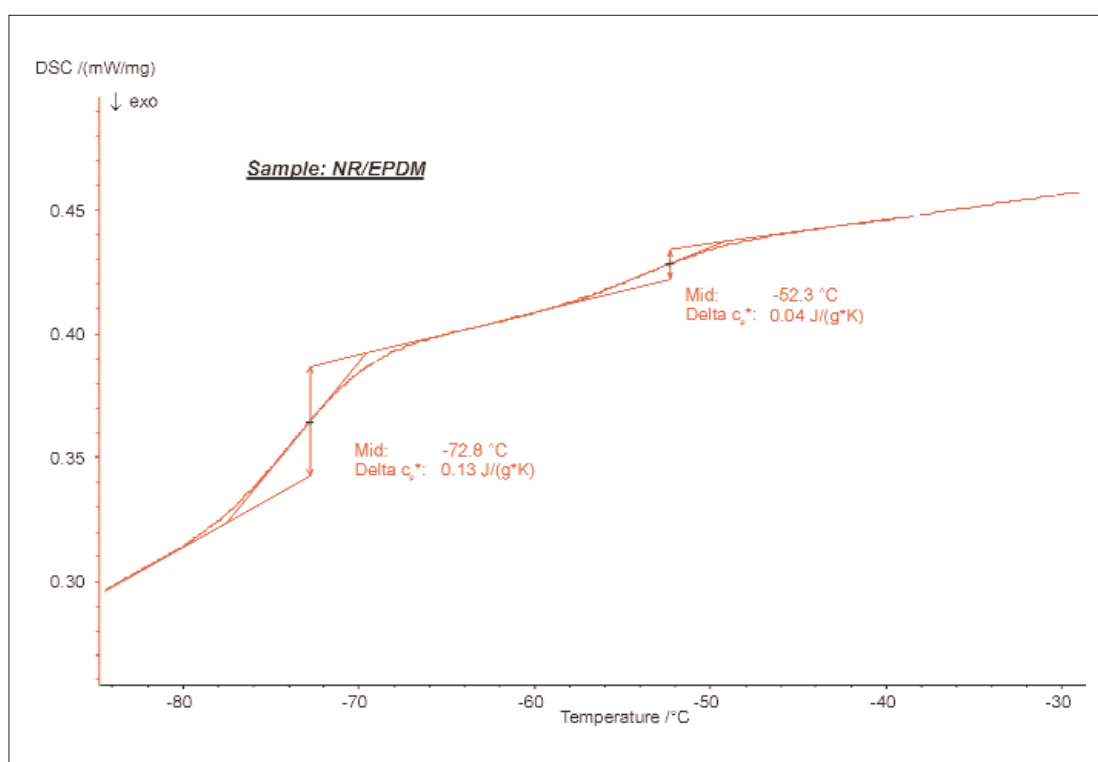
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Elastomers like natural rubber (NR) / ethylene propylene diene rubber (EPDM) are materials with the mechanical (or material) property that it can undergo much more elastic deformation under stress than most materials and still return to its previous size without permanent deformation. Natural rubber (NR) is a polymer of isoprene units; EPDM is a copolymer of ethylene, propylene and diene units.

Test Conditions:

Temperature range: -100 ... 100°C
Heating rate: 20 K/min
Atmosphere: Nitrogen at 20 ml/min

Sample mass: 14.34 mg
Crucible: Al, pierced lid



Results:

Two glass transitions were detected. The first one at -72.8°C (midpoint), with a change in specific heat of 0.13 J/(g*K), can be attributed to NR. The second one at -52.3°C, with a change in specific heat of 0.04 J/(g*K) is most probably related to the glass transition of EPDM.