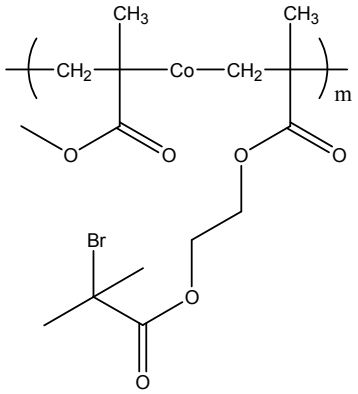
Sample Name:
Poly(methylmethacrylate-co-(isobutryl)ethylmethacrylate)
Sample #: P13068-2-MMABrIBEtMAran
Structure:



Composition:

Mn × 10^3 MMA-Co-BrIBEMA	PDI
26.7	2.17
Mol % BrIBEMA: 11%	Synd:56% Hetero:26% Iso:18%
T_g for the polymer	91 °C

Synthesis Procedure:

Poly(Methylmethacrylate-Co-2-bromoisobutyryl ethylmethacrylate) random copolymer was synthesized by Reversible Addition-Fragmentation cahin-transfert (RAFT).

SEC analysis of the obtained block copolymer in THF was carried out in THF and triethyl amine as eluent. The final random copolymer composition was confirmed by ^{1}H-NMR spectroscopy in CdCl3 by comparing the peak area of the methyl ester protons at 3.6 ppm against ethyl methacrylate at 4.2-4.17 ppm. Block copolymer PDI was determined by SEC.

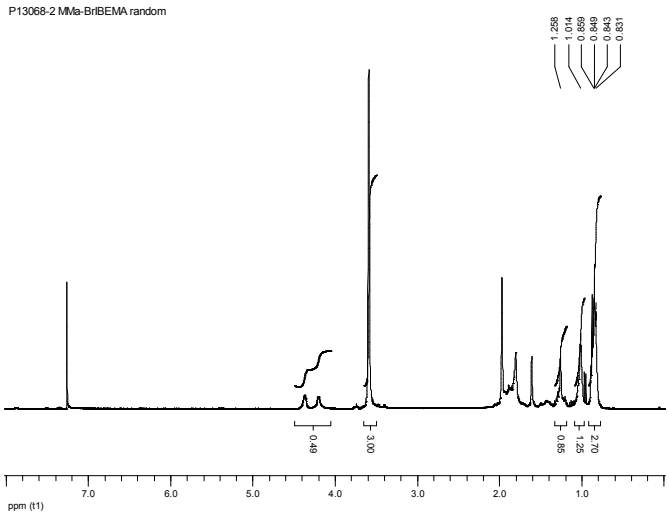
Thermal analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min.The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

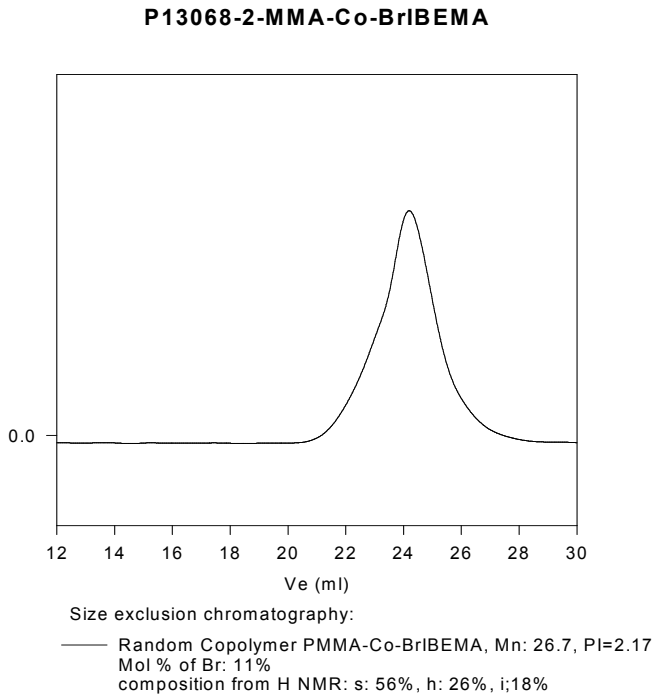
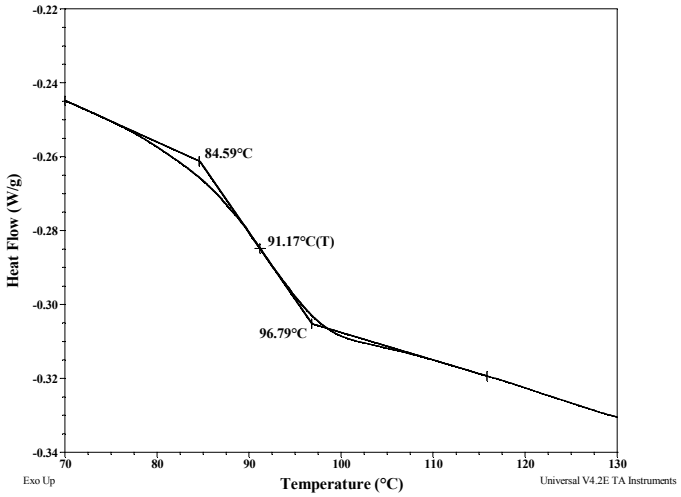
Solubility:

Polymer is soluble in THF and $CHCl_3$.

^{1}H-NMR Spectrum of the block copolymer :



SEC of the block copolymer:



DSC thermogram for the polymer: