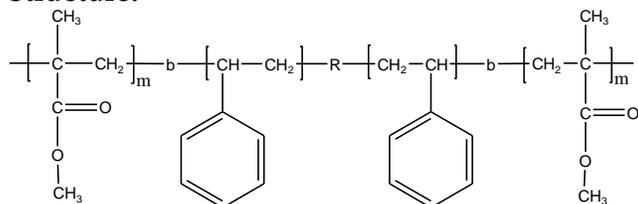


Sample Name:

Poly(methyl methacrylate-b-styrene-b-methyl methacrylate)

Sample #: P8360-MMAS MMA

Structure:

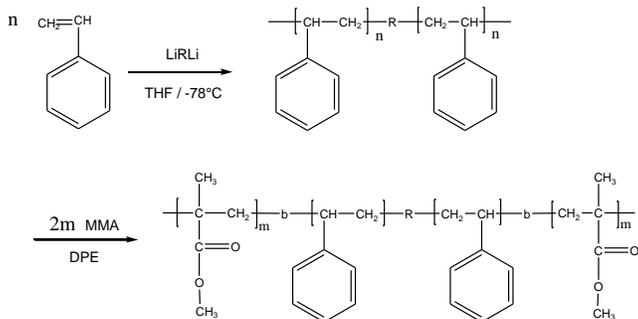


Composition:

Mn x 10 ³	PDI
52.0-b-94.0-b-52	1.15
T _g for PS block:	109°C
T _g for MMA block	135°C

Synthesis Procedure:

Poly(methyl methacrylate-b-styrene-b-methyl methacrylate) is prepared by living anionic polymerization with sequence addition of styrene followed by methyl methacrylate, using difunctional initiator. The scheme of the reaction is illustrated below:



Characterization:

The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

Thermal analysis:

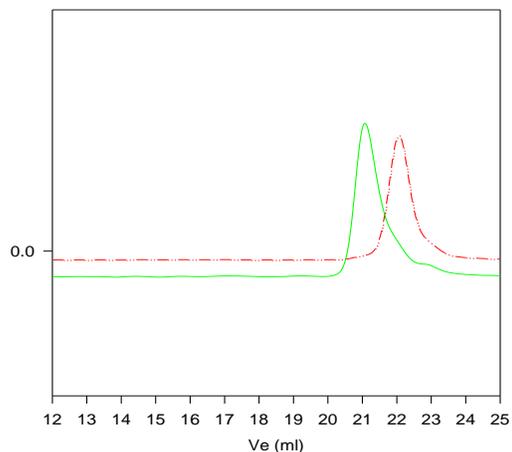
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Polymer is soluble in THF, CHCl₃, dioxane and benzene

SEC of Sample:

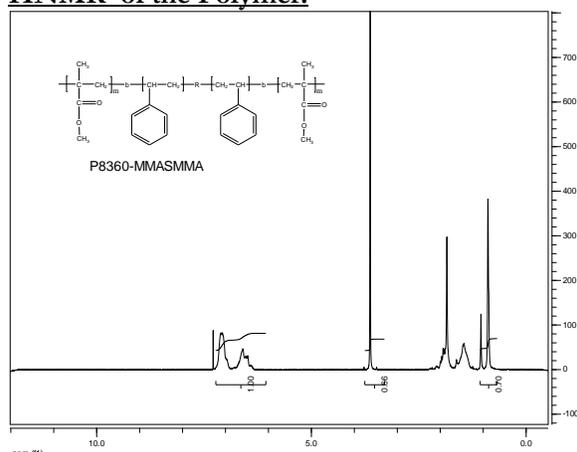
P8360-MMAS MMA



Polystyrene, M_n=94000, M_w=103000, PI=1.10

Block Copolymer PMMA(52000)-PS(94000)-PMMA(52000), PI=1.15

HNMR of the Polymer:



DSC thermogram for the polymer:

