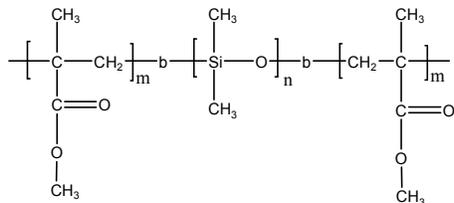


Sample Name:

Poly(methyl methacrylate -b- dimethyl siloxane -b- methyl methacrylate)

Sample #: P2634-MMADMSMMA

Structure:

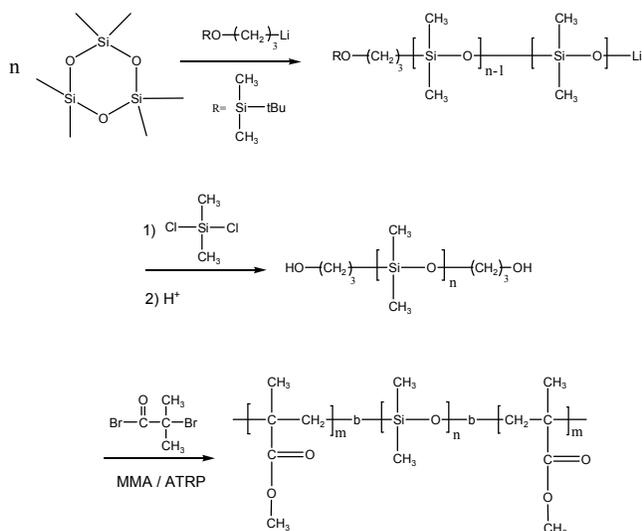


Composition:

Mn x 10 ³	PDI
8.0-4.0-8.0	1.21

Synthesis Procedure:

Poly(methyl methacrylate-b-dimethyl siloxane-b-methyl methacrylate) was prepared by living anionic polymerization with sequence addition of hexamethyl cyclotrisiloxane followed by methyl methacrylate (MMA). 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.

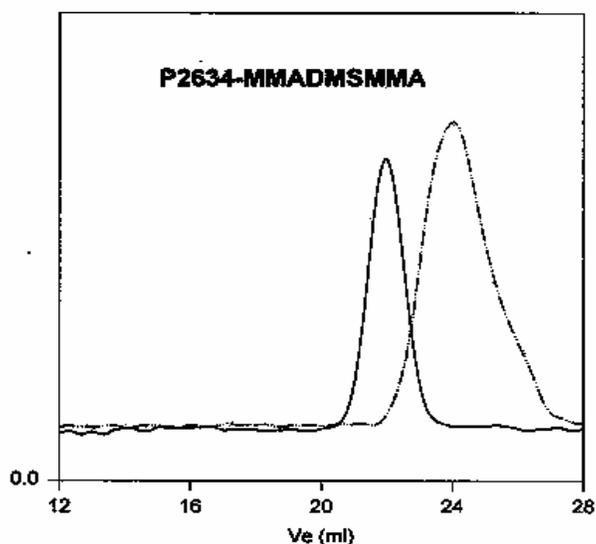
Thermal analysis:

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:

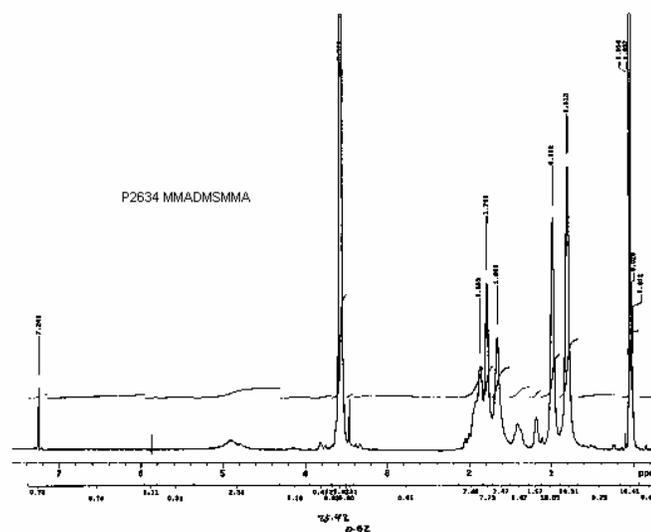
Polymer is soluble in CHCl₃, THF, DMF, toluene and precipitated out from cold ethanol, diethyl ether.

SEC of Sample:



----- Poly(dimethyl siloxane), M_n=4000, M_w=4200, PI=1.04
— Triblock Copolymer PMMA(8000)-PDMS(4000)-PMMA(8000), PI=1.21

¹H NMR of the sample:



DSC thermogram for the sample: PDMS block:

