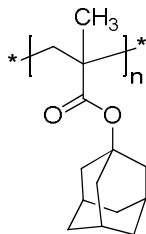


Sample Name: Poly(1-adamantyl methacrylate)

Sample # P9366-ADMMA

Structure:



Composition:

$M_n \times 10^{-3}$ (g/mol)	17.5
M_w/M_n	1.15
Microstructure tacticity:	Heterotactic > 85%
Glass transition temperature:	$T_g = 220^\circ\text{C}$

Synthesis:

Poly(1-adamantyl methacrylate) is obtained by anionic polymerization method.

Characterization:

The molecular structure and purity of the polymer were confirmed by proton NMR spectroscopy.

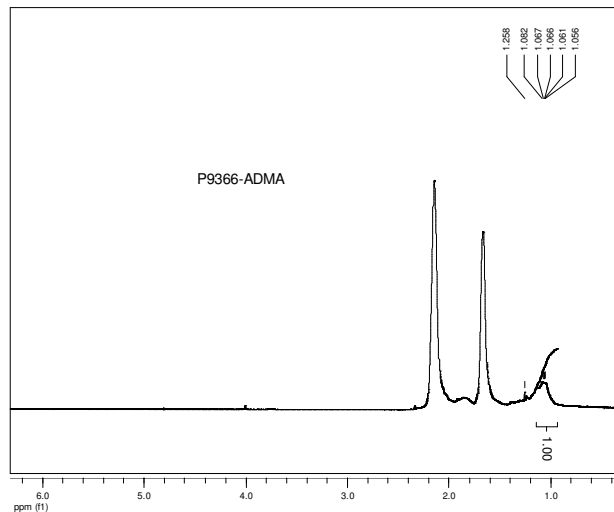
The molecular weight and polydispersity index (M_w/M_n) of the polymer were obtained by size exclusion chromatography (SEC) using THF as an eluent.

Thermal analysis was performed on TA Instruments Q100 differential scanning calorimeter (DSC) under a nitrogen atmosphere. The glass transition temperature (T_g) of the polymer was measured at a scan rate of $10^\circ\text{C}/\text{min}$ shortly after creating thermal history of the sample.

Solubility:

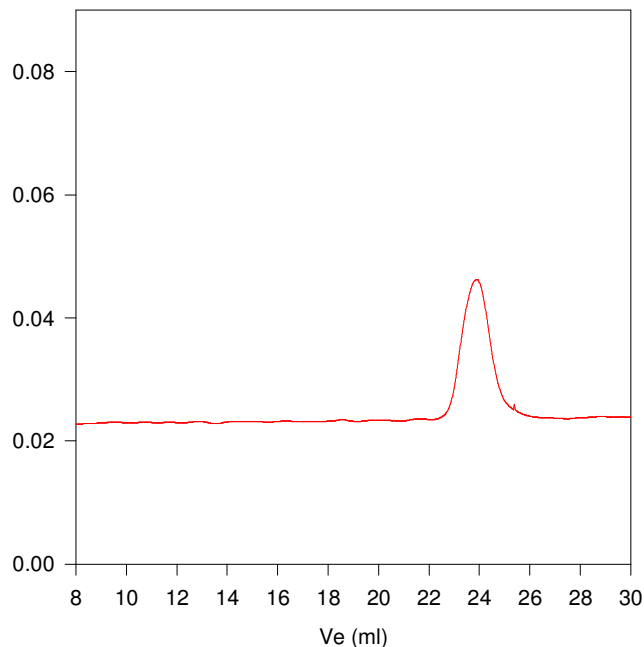
Poly(1-adamantyl methacrylate) is soluble in THF, chloroform, toluene, and 1,4-dioxane. The polymer precipitates from hexanes, methanol, and ethanol.

^1H NMR spectrum of the polymer in CDCl_3 :



SEC elugram of the polymer:

P9366-ADMMA



Size exclusion chromatograph of Poly adamantylacrylate:

$M_n=17,500$, $M_w=20,200$, $PI=1.15$

DSC thermogram (2nd heating scan, $10^\circ\text{C}/\text{min}$):

