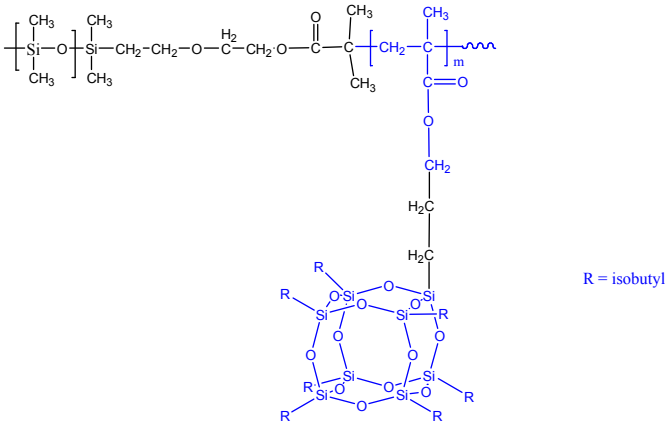
Sample Name:
Poly(dimethylsiloxane-b-POSSisobutylmethacrylate)

POSSisoButylMA: 3-(3,5,7,9,11,13,15-heptaisobutylpentacyclo[9.5.1.1$_{3,9}$.1$_{5,15}$.1$_{7,13}$] octasiloxan-1-yl)propylmethacrylate

Sample #: ***P14012-DMSPOSSisoBuMA***

Structure:



Composition:

Mn x 10^3 PDMS-b-POSSisoBuMA	PDI
5.0-b-5.0	1.14

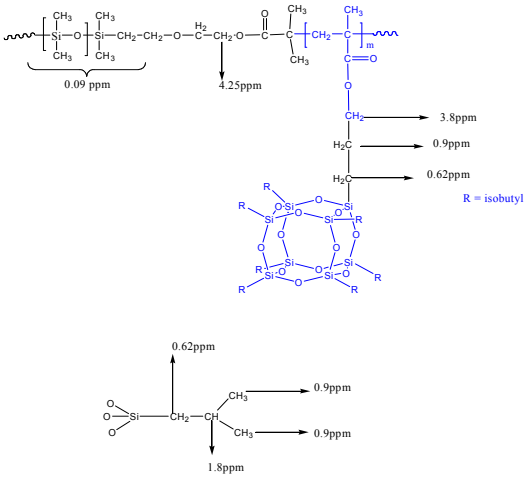
Synthesis Procedure:

Polymer is synthesized by controlled radical polymerization process.

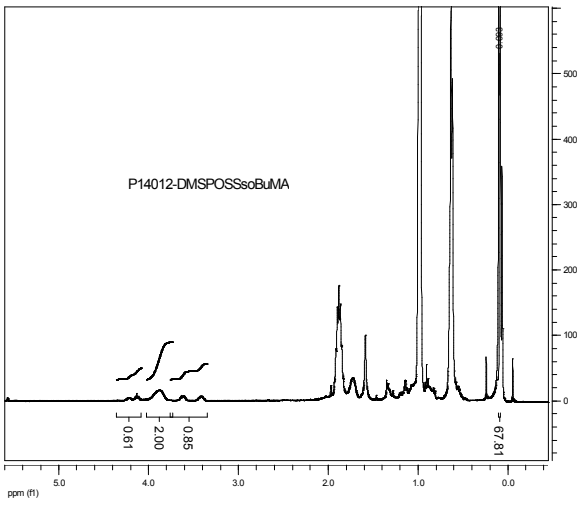
Purification of the polymer:
The obtained polymer dissolved in $CHCl_3$/toluene and pass through the column packed with silica. The polymer was recovered by precipitation in cold ether/ethanol mixture.

Solubility:
Polymer is soluble in $CHCl_3$, THF and toluene. The polymer precipitated out from hexane.

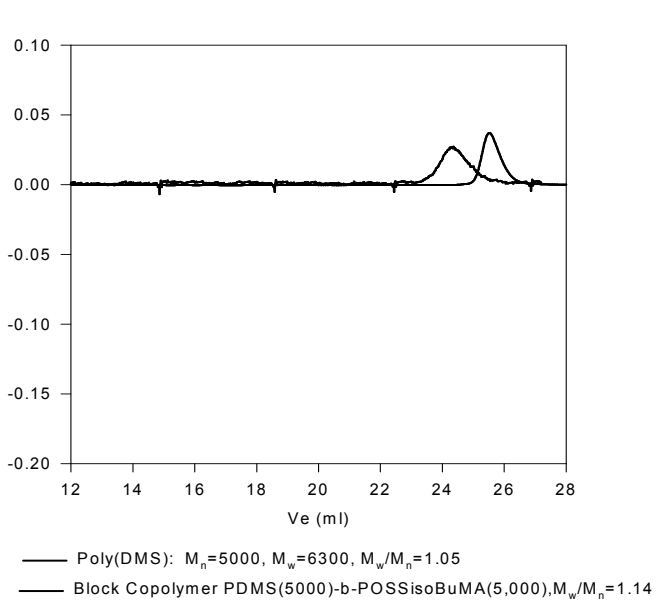
Chemical Shifts:



HNMR of the Product:



SEC of the block copolymer:



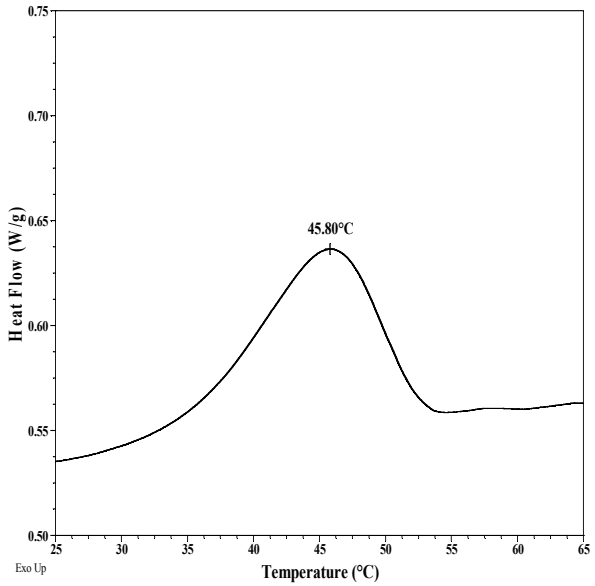
Thermal analysis of the P14012-DMSPOSSisoBuMA

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10^{o}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).

Melting and crystallization curve for the sample

The melting temperature (T_m) was taken as the maximum of the endothermic peak where as the crystallization temperature (T_c) was considered as the minimum of the exothermic peak.

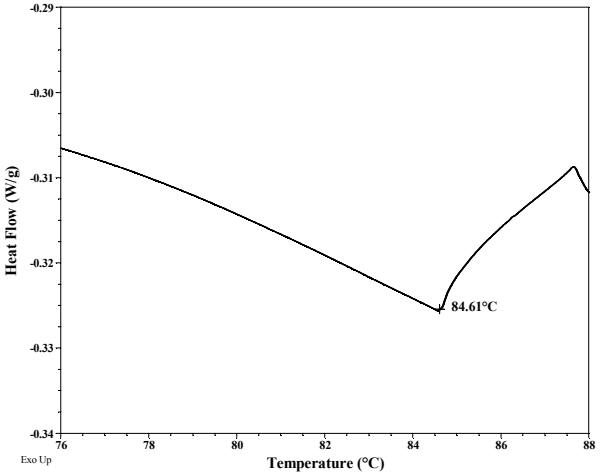
Crystallization curves POSSMA block:



Thermal analysis results at a glance:

Sample	T_m (^{o}C)	T_c (^{o}C)	T_g (^{o}C)
DMS block	-50	Not distinct	
POSSisoBuMA block	85	46	-

Melting curves for POSMMA:



Melting curve for DMS: