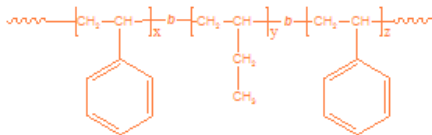


Sample Name: Poly(styrene)-b-poly(ethylene-co-butylene)-b-poly(styrene)

Obtained from the Hydrogenation of Poly (styrene-butadiene-Styrene) Poly butadiene rich in 1,2 microstructure

Sample #: P665-SEBS

Structure:



Composition:

Mn x 10 ³ (S-b-PEB-S)	PDI
95.2-b-457.8-b-97.3	1.07

T _g for PBd block	-15°C
T _g for PS block	106°C

Synthesis Procedure:

Poly(styrene-b-butadiene-b-styrene) is prepared by living anionic polymerization with sequence addition of styrene followed by butadiene and then styrene again. Polymerization carried out in THF. The obtained polymer hydrogenated in presence of Pd/CaCo₃/Wilkinson catalyst.

Purification after the Hydrogenation:

The obtained polymer was filtered to remove the catalyst. It was observed that even after the purification by passing several times through the filter paper the obtained polymer is light dark in color. The solution in Toluene is light ivory in color.

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.

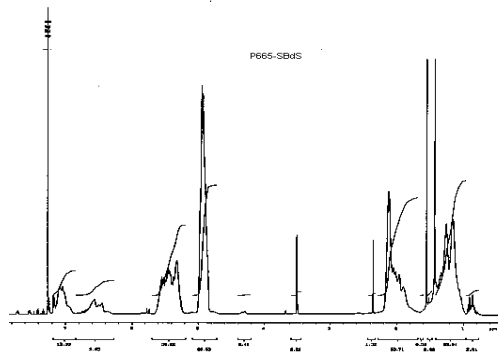
Thermal analysis

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 20°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).

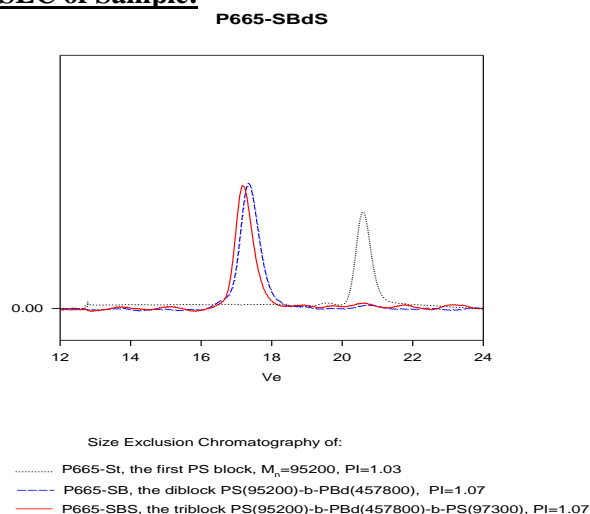
Solubility:

Polymer is soluble in Hot THF and toluene.

HNMR of the precursor of PS-b-Bd-S sample:



SEC of Sample:



Thermogram for Bd and PS block polymers:

