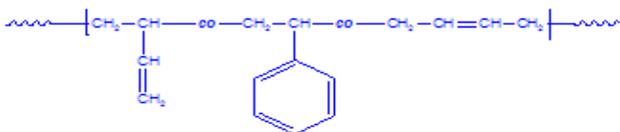


Sample Name:
Random Copolymer Poly(styrene-co-butadiene)

Sample #: P2600-SBdran

Structure:



Composition:

PSBr (mol%) : 25.26

Mn x 10 ³	PDI
PS-co-PBd	
5.4	1.08
T _g for random polymer	47°C

Synthesis Procedure:

Random Copolymer Poly(styrene-co-butadiene) is prepared by radical polymerization of styrene and butadiene.

Characterization:

The polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The copolymer composition was calculated from ¹H-NMR spectroscopy.

Thermal analysis:

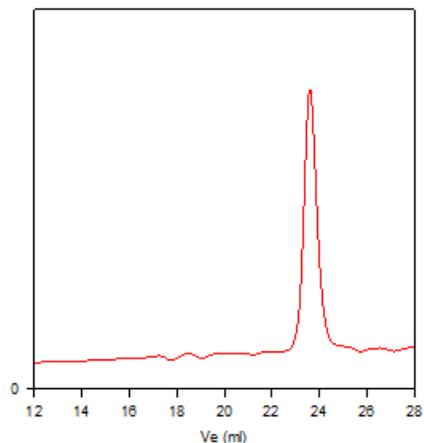
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Random Copolymer Poly(styrene-co-butadiene) is soluble in CHCl₃, THF, DMF, toluene and precipitated out from methanol.

SEC of the random copolymer:

P2600-SBdran



Size exclusion chromatography of random copolymer of styrene with butadiene rich in 1,2 addition:
M_n=5400 M_w=5800, PI=1.08,
Butadiene 1,2 addition= 26.8 mole%

Thermogram of the sample:

