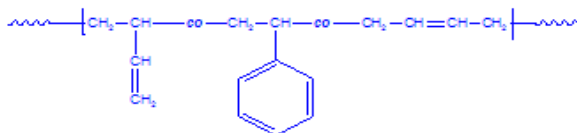


Sample Name:

Random Copolymer Poly(styrene-co-butadiene)

Sample #: **P43000-SBdran**

Structure:



Composition:

Styrene (mol%): 25.00

| Mn x 10 ³ PS-co-PBd | PDI |
|-----------------------------------|-------|
| 7.5 | 1.02 |
| T _g for random polymer | -22°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.

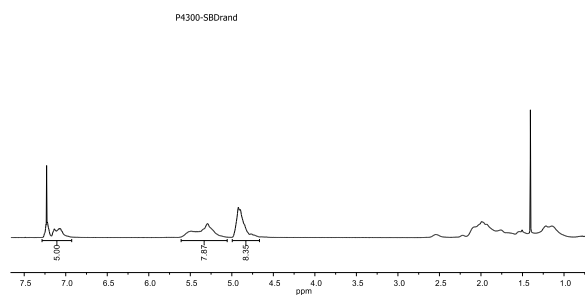
Thermal analysis:

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).

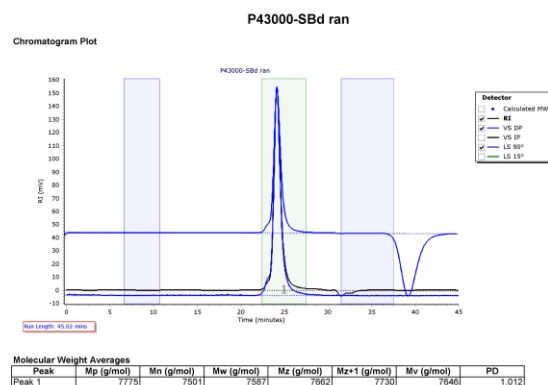
Solubility:

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

¹H-NMR spectrum of the sample:



SEC elugram of the random copolymer:



Thermogram of the sample:

