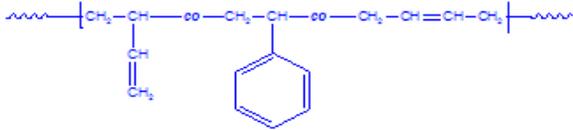


Sample Name: Random Copolymer Poly (styrene-co-butadiene)
Equivalent to SBR-1500

Sample #: P42084-SBdran
1,4 addition (87%) and 1,2 addition (13 %)

Structure:



Composition:

Mn x 10 ³ PS-co-PBd (Equal to SBR 1500)	PDI
166.5	1.06

T _g for random polymer = -25°C
PS = 23.5 mol%

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.

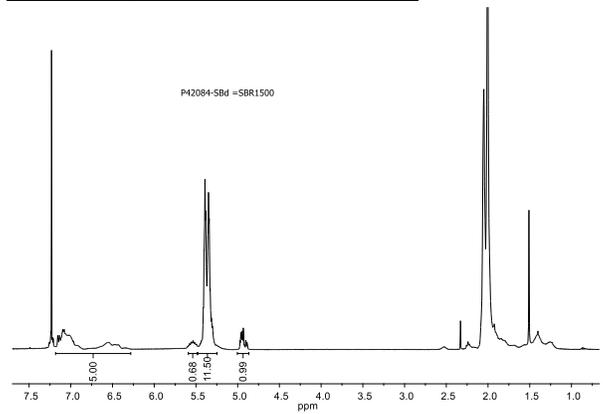
Thermal analysis:

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:

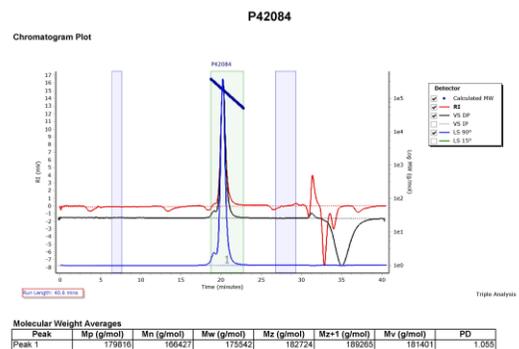
Random Copolymer Poly (styrene-co-butadiene) is soluble in CHCl₃, THF, DMF and toluene. It precipitated out from methanol.

H NMR spectrum of the Sample:



SEC elugram of the random copolymer:

Agilent GPC/SEC Software



DSC thermogram of the sample:

