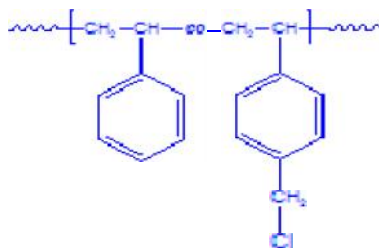


**Sample Name:**

Random Copolymer Poly(styrene-co-p-chloromethyl styrene)

**Sample #: P2624-SSMeClran****Structure:****Composition:**

PSMeCl (mol%) : 14

Mn x 10 <sup>3</sup> PS-co-PSMeCl	PDI
8.7	1.13
T <sub>g</sub> for random polymer	100°C

**Synthesis Procedure:**

Random Copolymer Poly(styrene-co-p-chloromethyl styrene) is prepared by radical polymerization of styrene and p-chloromethyl styrene in the presence of TEMPO .

**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 <sup>1</sup>H-NMR spectroscopy by comparing the peak area the aromatic protons of styrene at about 7.05 ppm with the protons of chloromethyl styrene at about 4.6 ppm.

**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<sub>g</sub>).

**Solubility:**

Random Copolymer Poly(styrene-co-methyl methacrylate) is soluble in CHCl<sub>3</sub>, THF, DMF, toluene and precipitated out from methanol.

**DSC thermogram for the sample**