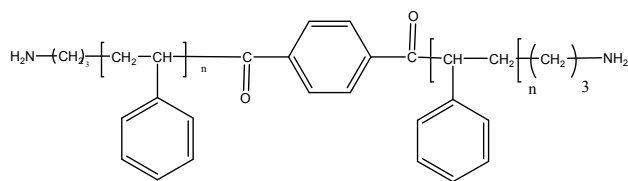


Sample Name:

α - ω Diamino Terminated Polystyrene

Sample #: P11163-S2NH2

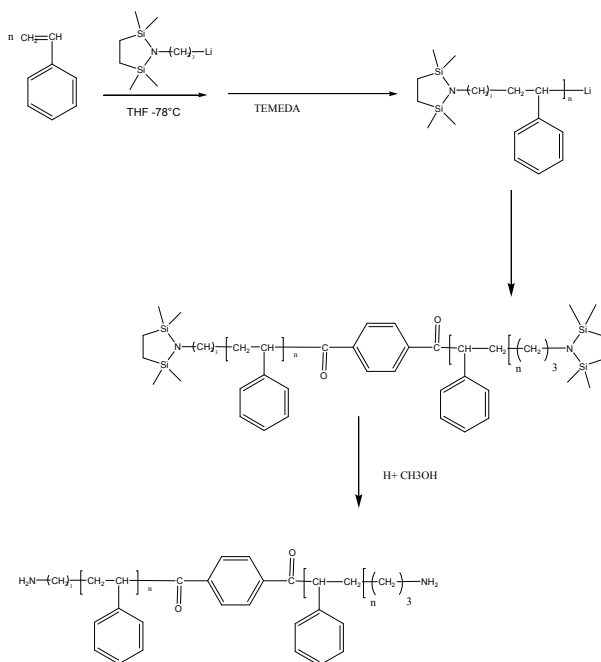


Composition:

Mn $\times 10^3$	PDI
30	1.35
T _g (°C)	102

Synthesis Procedure:

α , ω -amino terminated polystyrene was synthesized by anionic living polymerization.



Characterization:

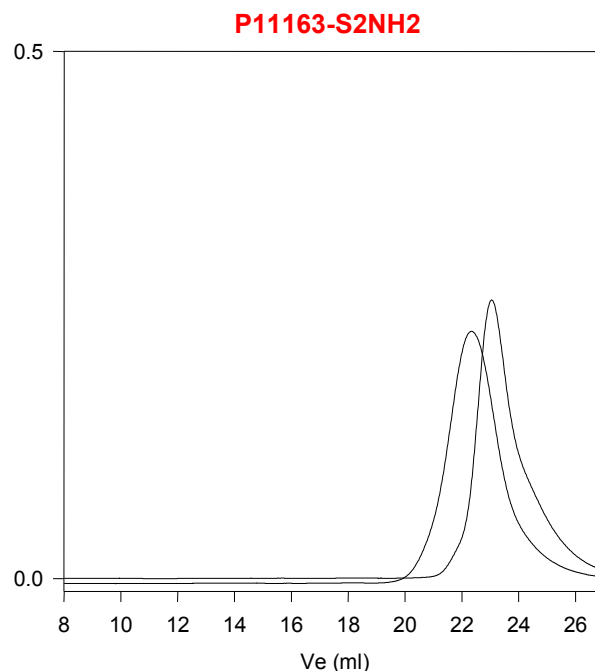
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. However, amino terminated polystyrene was found to interact with chromatography columns and therefore the amino group was protected by reaction with 1-naphthyl isocyanate before GPC analysis. Removal of the protecting group was confirmed by UV spectroscopy and the degree of functionality was confirmed by titration with HClO₄ using crystal violet as the indicator.

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: Polymer is soluble in THF, CHCl₃ toluene and precipitated out from methanol and hexane.

SEC of Sample:



Size exclusion chromatography of diamino terminated polystyrene. (NH₂ group end capped with 1-naphthyl isocyanate)

Mn 15,000 Mw/Mn 1.3 before linking

After linking reaction

M_n=30,000, M_w=40,500, PDI=1.35, functionality=1.95.