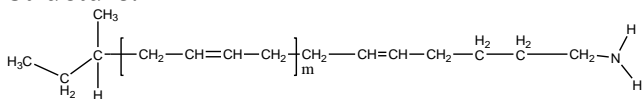


**Sample Name:** Amino Terminated  
Polybutadiene, 1, 4- rich microstructure  
**Sample #:** P6057-BdNH<sub>2</sub>

### Structure:

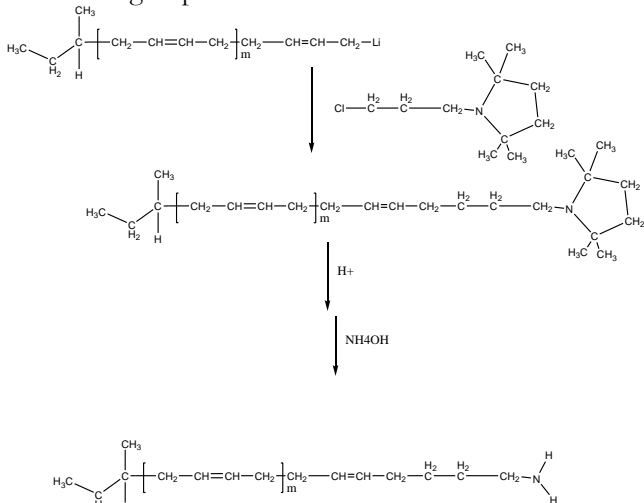


### Composition:

Mn x 10 <sup>3</sup>	PDI
7.0	1.03
Functionality	>60%
By titration	> 64%

### Synthesis Procedure:

1,4-addition amino terminated polybutadiene was prepared by anionic living polymerization of butadiene in apolar solvent using Sc. BuLi followed by termination of polymerization reaction by 2,2,5,5-tetramethyl-1-(3-chloropropyl)-1-aza-2,5-disilacyclopentane, followed by deprotection of NH<sub>2</sub> functional group.



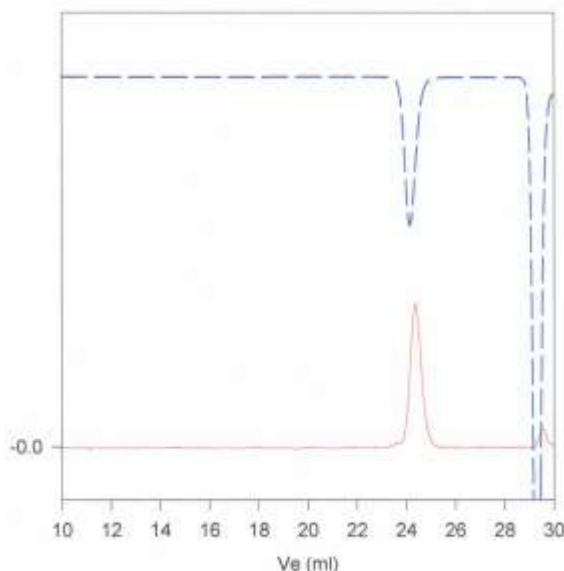
### Characterization:

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co.

**Functionality:** The functionality of polymer was determined by the titration with  $\text{HClO}_4$  using crystal violet as the indicator

**GPC of the polymer:**

P6057-BdNH2



Size exclusion chromatograph of amino terminated polybutadiene (1,4-addition, amino encaped by naphthyl isocyanate):

— RI detector,  $M_n=7000$ ,  $M_w=7200$ ,  $M_w/M_n=1.03$

— — UV detector working at 290nm  
The functionality by titration:  $f=0.6$