



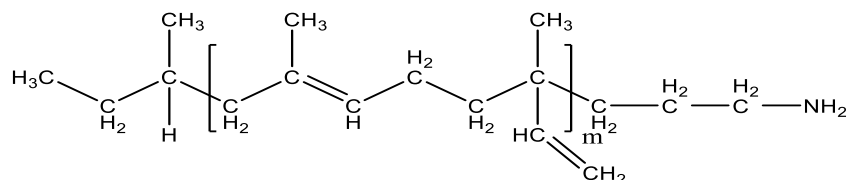
Product Profile

Identification


Product Name: Poly(1,4-isoprene), ω-Amino-terminated

Sample #: P44179-IPNH2

Structure:

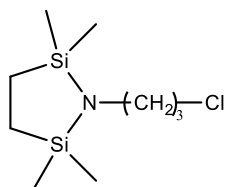


Composition:

Mn (g/mole)	36,000
Mw (g/mole)	39,500
Mw/Mn	1.08
Test Ninhydrin (primary amine group)	Blue color pass 
Primary Amino content	%NH2 85%

Method of Synthesis

1, 4-addition hydroxy terminated polyisoprene was prepared by anionic living polymerization in a non-polar solvent using *sec*-BuLi initiator followed by termination with following electrophile.



Solubility in different solvents:

THF	√	Methanol	X
CHCl3	√	Hexane	√
Toluene	√		

Validation of Architecture

A. Gel Permeation Chromatography (GPC), SEC Profile:

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.

