

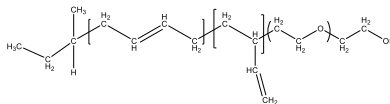
Product Profile

Identification

Product Name: Poly(butadiene-b-ethylene oxide)

Product Lot Number: P45120-BdEO

Product Chemical Architecture:



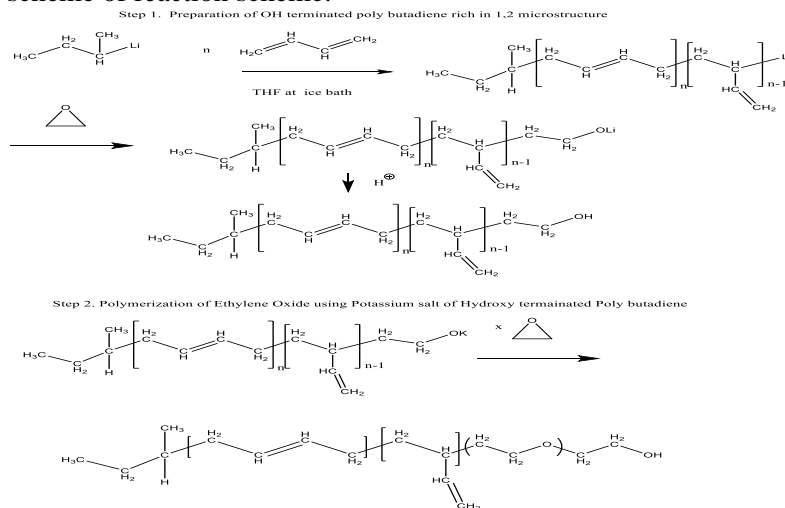
Composition:

$\text{Mn} \times 10^3$ Bd-b-EO	Mw/Mn (PDI)	% 1,2 addition Butadiene
0.8-b-0.6	1.04	>85.0
Dp of each block: $\text{Bd}_{15}\text{EO}_{13}$ from ^1H NMR		

Method of Synthesis

The polymer is synthesized by anionic polymerization using sec Butyl-lithium as initiator in 2 steps synthesis.

- Synthesis of Hydroxyl end terminated poly butadiene and
- Polymerization of ethylene oxide using potassium salt of poly butadiene, see the following scheme of reaction scheme:



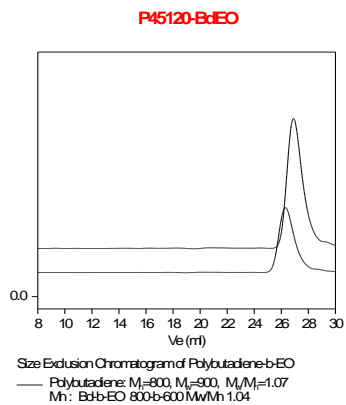
Solubility in different solvents

THF	√		
CHCl_3	√	CHCl_3	√
Toluene-Hot	√		

Purification of Polymer to remove naphthalene < 0.1% level.

Validation of Architecture

A. Gel Permeation Chromatography (GPC), SEC- Profile for PBd-EO:



B. NMR (HNMR) of Poly butadiene-b-Ethylene Oxide: PbdOH

