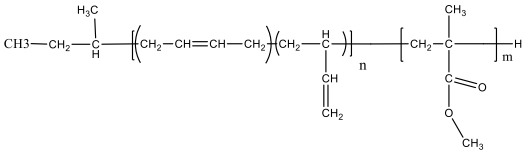
# Product Profile

## Identification

**Product Name: Poly(1,2-butadiene)-b-poly(methyl methacrylate)**

**Product Lot Number: P18188PR-BdMMA**

**Product Chemical Architecture:**



**Composition:**

| | |
|---|---|
| **Mn (g/mole) Bd-b-MMA** | **65,000-b-21,500** |
| **Mw/Mn** | **1.04** |
| **dn/dc (mL/g)** | **0.105-to 0.120 depending on composition of the block copolymer** |

## Method of Synthesis

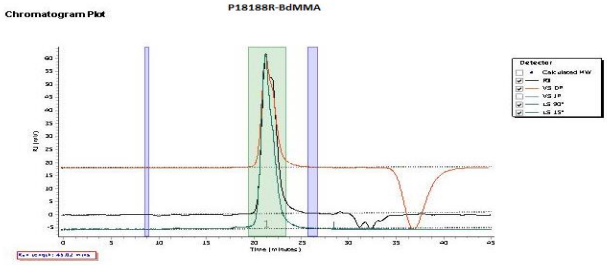
The polymer is synthesized by anionic polymerization Sec. Butyllithium as initiator.

**Solubility in different solvents**

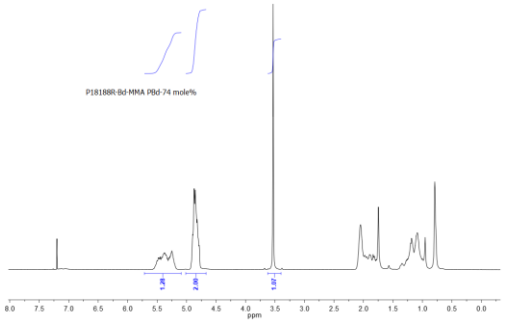
| | | | |
|---|---|---|---|
| THF | √ | DMF | **X** |
| Alcohol | **X** | CHCl3 | √ |
| Toluene | Yes depends on composition | DMSO | **X** |

## Validation of Architecture

**A. <u>Gel Permeation Chromatography (GPC), SEC- Profile:</u>**




Molecular Weight Averages

| Peak | Mp (g/mol) | Mn (g/mol) | Mw (g/mol) | Mz (g/mol) | Mz+1 (g/mol) | Mv (g/mol) | PD |
|---|---|---|---|---|---|---|---|
| Peak 1 | 99878 | 86451 | 89991 | 93426 | 96707 | 92496 | 1.041 |

**B. <u>NMR (HNMR) of polymer</u>**