

Product Profile

Identification

Product Name: Poly(styrene-b-methylmethacrylate)

Product Lot Number: P4079-R-SMMA

CAS #: 25034-86-0

Product Chemical Architecture:



Composition:

Composition (S-b-MMA)	70,000-b-26,000
MMA mole%	26.8
Tacticity (atac, iso, syn)	> 78% syn
Mn (g/mole)	96,000
Mw (g/mole)	97,000
Mw/Mn	1.01
dn/dc (mL/g) in THF at 30 °C	0.160

Method of Synthesis

The polymer is synthesized by anionic polymerization process.

Solubility in different solvents:

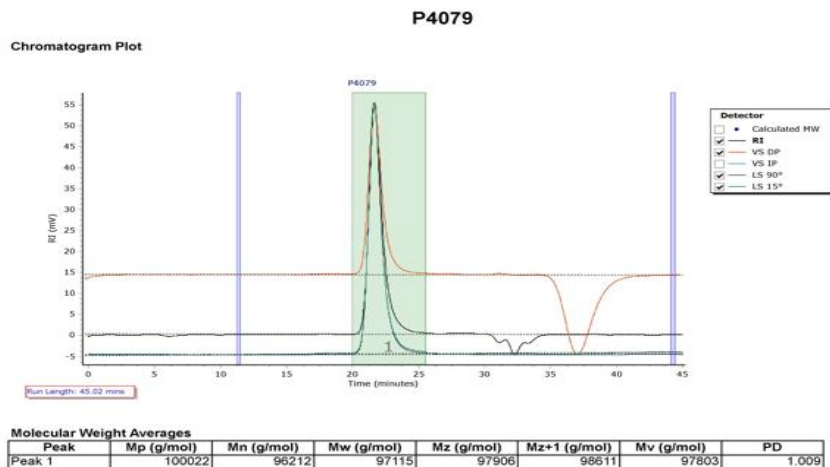
THF	√	DMF	√
Alcohol	X	CHCl ₃	√
Toluene	Depends on composition	Water	X

Validation of Architecture

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

Molecular weights were determined by Agilent Technologie 1260 Infinity II GPC/SEC System equipped with Triple detector (RI, Viscometer, RALS 90° and LS 15°) and three columns (PLgel, 7.5x300 mm, 5μm-10μm, 10⁵-10⁶Å). THF (stabilized BHT) with 1%(v/v%) TEA was the eluent. The flow rate was 1.0 ml/min.

Agilent GPC/SEC Software



B. NMR (^1H NMR) of SMMA

SMMA sample was dissolved in CDCl_3 . ^1H NMR spectra was determined using a 500 MHz. Bruker Avance III spectrometer.

