

# Product Profile

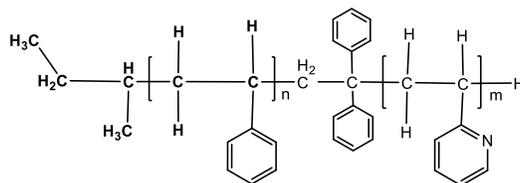
## Identification

**Product Name:** Poly(styrene-b-2-vinyl-pyridine)

**Product Lot Number:** P18869-R-S2VP

**CAS #:** 24980-54-9

**Product Chemical Architecture:**



**Composition:**

<b>Composition (S-b-2VP)</b>	<b>65,000-b-64,000</b>
<b>2VP mole %</b>	<b>49.8</b>
<b>Mn (g/mole)</b>	<b>129,000</b>
<b>Mw (g/mole)</b>	<b>131,00</b>
<b>Mw/Mn</b>	<b>1.02</b>
<b>dn/dc (mL/g) in DMF at 35 °C</b>	<b>0.16</b>

## Method of Synthesis

The polymer is synthesized by anionic polymerization process.

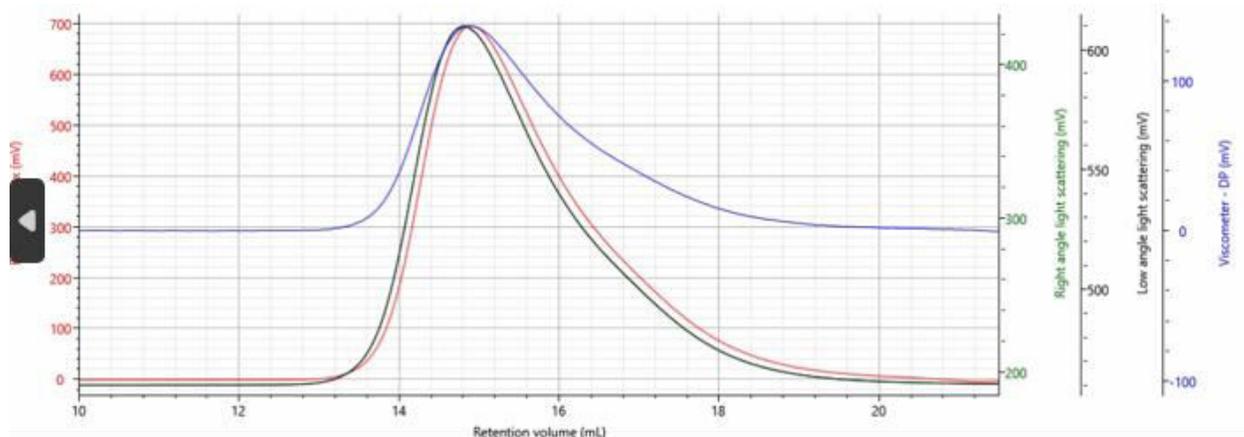
**Solubility in different solvents:**

THF	√	DMF	√
Alcohol	<b>Depends on composition</b>	CHCl <sub>3</sub>	√
Toluene <sub>(hot)</sub>	√	Water	X

## Validation of Architecture

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

Molecular weights were determined by Malvern OmniSec Reveal & Resolve GPC/SEC System equipped with Triple detector (RI, Viscometer, RALS 90° and LALS 7°) and two columns (PSS, SDV, 8x300 mm). DMF with 0.023M LiBr was the eluent. The flow rate was 0.7 ml/min.



Results (Rows)

Injection Name	RV (mL)	Mn (g/mol)	Mw (g/mol)	Mp (g/mol)	Mz (g/mol)	Mw/Mn
P18869, Injection 1, Peak 1	14.91	128,892	131,170	129,838	134,305	1.018

**B. NMR ( $^1\text{H}$ NMR) of S2VP in  $\text{CHCl}_3$  (500MHz)**

P18869-S2VP

