

# Product Profile

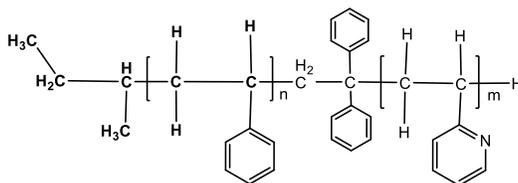
## Identification

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

**Product Lot Number:** P8721-R-S2VP

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

**Product Chemical Architecture:**



**Composition:**

<b>Composition (S-b-2VP)</b>	<b>123,000-b-14,000</b>
<b>2VP mole %</b>	<b>10.1</b>
<b>Mn (g/mole)</b>	<b>137,000</b>
<b>Mw (g/mole)</b>	<b>139,000</b>
<b>Mw/Mn</b>	<b>1.02</b>
<b>dn/dc (mL/g) in DMF at 35 °C</b>	<b>0.164</b>

## Method of Synthesis

The polymer is synthesized by anionic polymerization process.

**Solubility in different solvents:**

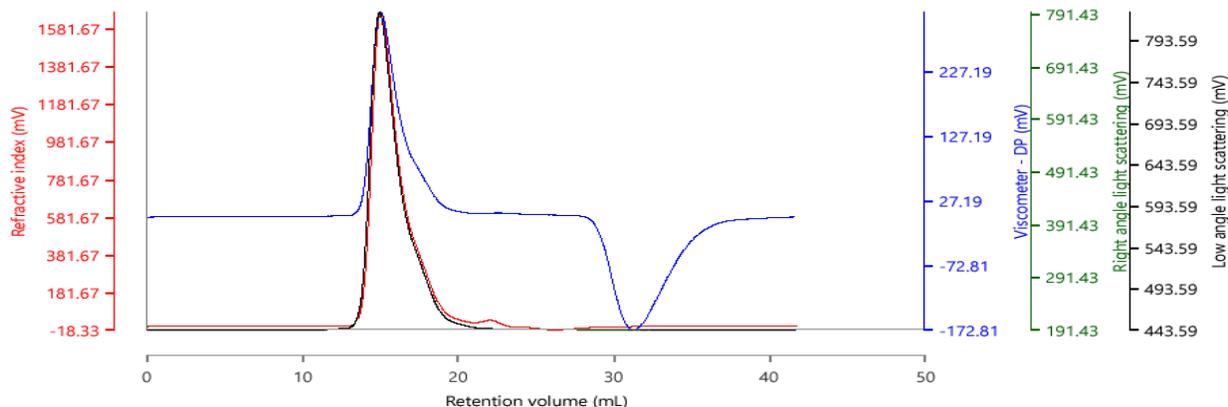
THF	√	DMF	√
Alcohol	<b>Depends on composition</b>	CHCl <sub>3</sub>	√
Toluene <sub>(hot)</sub>	√	Water	<b>X</b>

## 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.

Raw Data Chart



Results (Rows)

Injection Name	RV (mL)	Mn (g/mol)	Mw (g/mol)	Mp (g/mol)	Mz (g/mol)	Mw/Mn
P8721, Injection 1, Peak 1	15.05	136,516	139,148	135,250	143,772	1.019

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

