

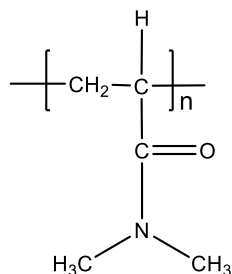
# Product Profile

## Identification

**Product Name:** Poly(N-N-dimethylacrylamide)

**Product Lot Number:** P40560F-R-DMA

**Product Chemical Architecture:**



**Composition:**

<b>Mn (g/mole)</b>	<b>300,000</b>
<b>MW (g/mole)</b>	<b>419,000</b>
<b>MW/Mn</b>	<b>1.40</b>
<b>dn/dc (mL/g)</b>	<b>1.65 in water</b>

## Method of Synthesis

The polymer is prepared by radical polymerization process.

**Solubility in different solvents**

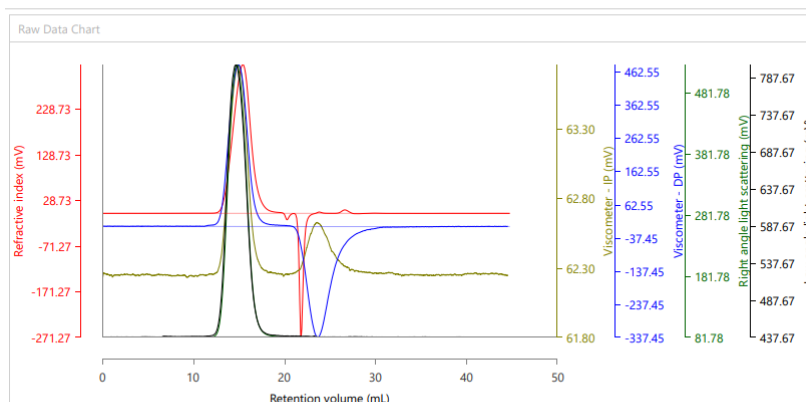
THF	√	DMF	√
Alcohol	√	CHCl <sub>3</sub>	√
Toluene	X	DMSO	√

## Validation of Architecture

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

Polymer Source

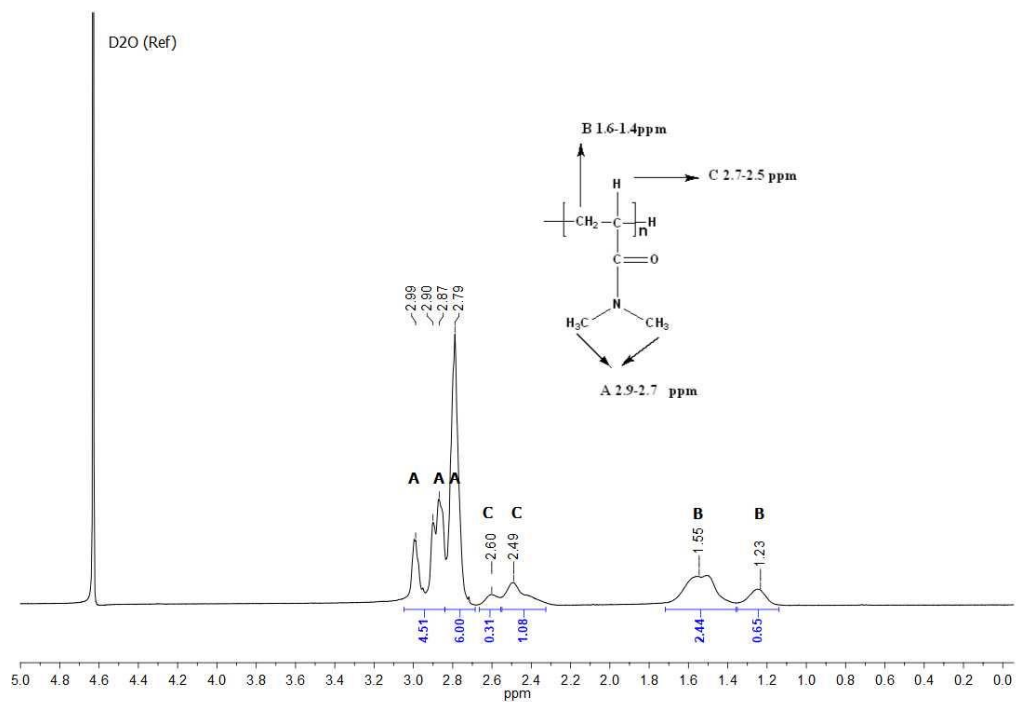
Malvern Panalytical



Results (Rows)

Injection Name	RV (mL)	Mn (g/mol)	Mw (g/mol)	Mp (g/mol)	Mz (g/mol)	Mw/Mn
P40560F-DMA-304K, Injection 1, Peak 1	15.45	299,801	418,615	313,481	605,310	1.396

## B. NMR (HNMR) OF PDMA general



## C. Dependence of glass transition temperature ( $T_g$ ) of PDMA from its molecular weight:

