

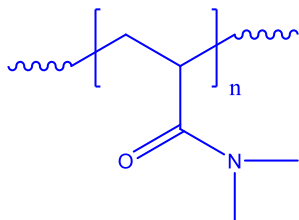
# Product Profile

## Identification

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

**Product Lot Number:** P41437E-R-DMA

**Product Chemical Architecture:**



**Composition:**

|                     |                       |
|---------------------|-----------------------|
| <b>Mn (g/mole)</b>  | <b>329,000</b>        |
| <b>MW (g/mole)</b>  | <b>437,000</b>        |
| <b>Mw/Mn</b>        | <b>1.33</b>           |
| <b>dn/dc (mL/g)</b> | <b>0.165 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

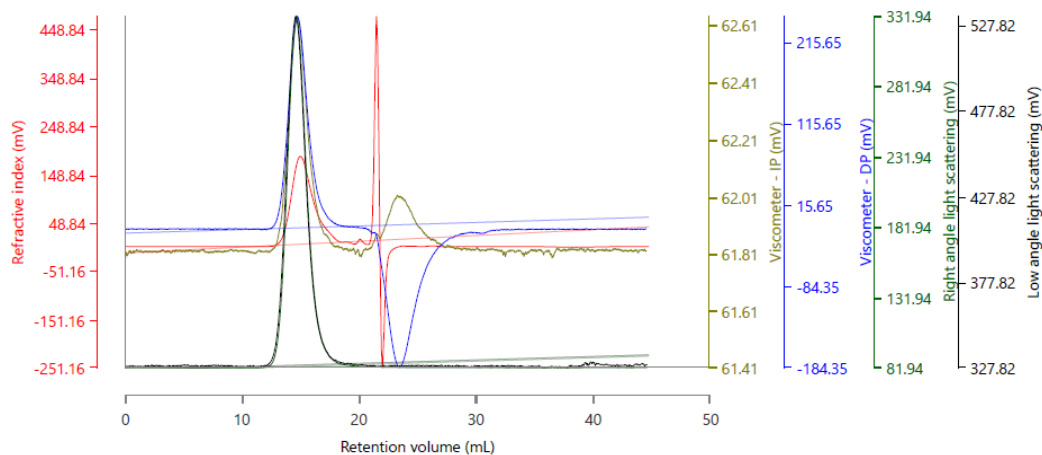
**A. Gel Permeation Chromatography (GPC), SEC- Profile:**

Polymer Source

Malvern Panalytical



Raw Data Chart



Results (Rows)

| Injection Name               | RV (mL) | Mn (g/mol) | Mw (g/mol) | Mp (g/mol) | Mz (g/mol) | Mw/Mn |
|------------------------------|---------|------------|------------|------------|------------|-------|
| P41437E, Injection 1, Peak 1 | 14.98   | 328,895    | 436,718    | 431,800    | 595,877    | 1.328 |

**B. NMR (HNMR) OF PDMA general**



**C. Dependence of glass transition temperature (T<sub>g</sub>) of PDMA from its molecular weight:**

