Sample Name:
Poly(N-N-diethylacrylamide)

Sample #: P18099-DEAMD

Synthesis by Anionic polymerization

Structure:
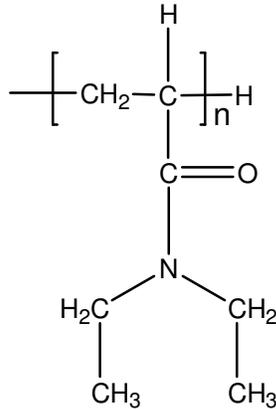
Composition:

Mn x 10^3 w.r.t Polystyrene reference	Mw/Mn
97.0	1.16
220.0 w.r.t PMMA reference	1.16
T_g (^oC)	81
Viscosity in Methanol at 25 oC: $[\eta]=$ 90ml/g	Mv:287,000

Synthesis Procedure:
The polymer is synthesized by GTP polymerization.

Characterization:
The molecular weight and polydispersity index (PDI) of the polymer are obtained by size exclusion chromatography

Thermal analysis:
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solution viscosity:
Intrinsic viscosity was determined in methanol at 25 ^{o}C using ubbelhode viscometer. The molecular weight is calculated based on the following equation in Methanol at 25 °C:

$$[\eta] = 0.0175 \times M_v^{0.68}$$

Solubility:
Polymer is soluble in methanol, ethanol and water, precipitated in hexane.

SEC of Homopolymer:

Sample ID: P18099-NN-DEAMD

Concentration (mg/mL)	2.0379
Sample dn/dc (mL/g)	0.1840
Method File	PG80K-July-2013-0000.xcm
Column Set	3x PL 1113-6300
System	System 1
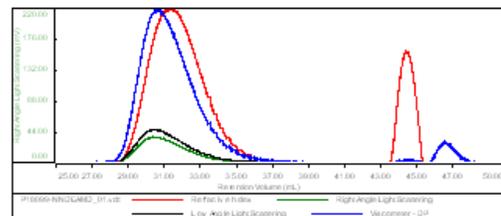
Sample	Mn	Mw	Mp	Mw/Mn	IV
P18099-NNDEAMD_01.vMI	96,769	112,196	103,334	1.159	0.9081
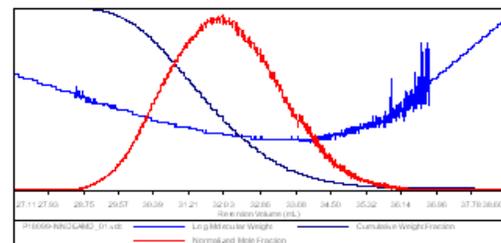
DSC thermogram for the polymer: