<u>Sample Name</u>: **Poly(glycidyl methacrylate)** 

Sample #: P18993A-GMA (by GTP process)

#### **Structure:**

$$CH_3$$

$$CH_2$$

$$C=0$$

$$CH_2$$

$$CH_2$$

$$CH_2$$

## **Composition:**

Mn x 10 <sup>3</sup>	PDI			
91.0	1.5			
T <sub>g</sub> (°C)	72			
Microstructure: Syndio:Hetero:iso = 55: 33: 12				

## **Synthesis Procedure:**

Poly(glycidyl methacrylate) is obtained by living anionic /GTP polymerization of glycidyl methacrylate. The reaction scheme used for the polymer synthesis is shown below:

$$\begin{array}{c} \text{CH}_3 \\ \text{CH}_2 & \begin{array}{c} \text{CH}_3 \\ \text{CH}_2 & \end{array} \\ \text{C} & \begin{array}{c} \text{CH}_3 \\ \text{GTP process} \end{array} \end{array}$$

## **Characterization:**

The molecular weight and polydispersity index (PDI) of Poly(glycidyl methacrylate) 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  $10^{\circ}$ 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 ( $T_g$ ).

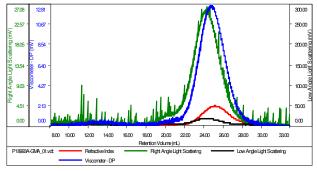
#### **Solubility:**

Poly(glycidyl methacrylate) is soluble in THF, CHCl<sub>3</sub>, toluene and dioxane. The polymer precipitates from cold methanol and ethanol.

# **SEC of Homopolymer:**

### Sample ID: P18993A-GMA

Concentration (mg/mL)	1.0485
Sample dn/dc (mL/g)	0.0840
Method File	PS80K-NOV27-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispers	Intrinsic Viscosity (dL/g)
P18993A-GIMA_01.vdt	91,144	137,721	106,367	1.511	0.9308

#### DSC thermogram of the polymer:

