



Differential Scanning Calorimetry (DSC) & Rheology

The data shown in this report relate to melting point data (DSC) and Rheology profiles of the surfactants listed below. The melting point data is included to indicate at what temperature the material is fully liquid (Melt Point), as well as what percentage is melted at room temperature (25°C). The Rheology data serves to indicate the viscosity of these materials at a variety of temperatures across a range of shear rates. These data points together were gathered with the intent to display the handleability of these materials across a range of potential conditions.

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Figure 1: Melt Point Determination of BIO-SOFT® NC-10

Melt Point, °C (°F)	Melt Range, °C (°F)	% Melted at 25°C (77°F)
37.06 (98.71)	-4.89 (23.2) – 37.06 (98.71)	92.1

BIO-SOFT® NC-10

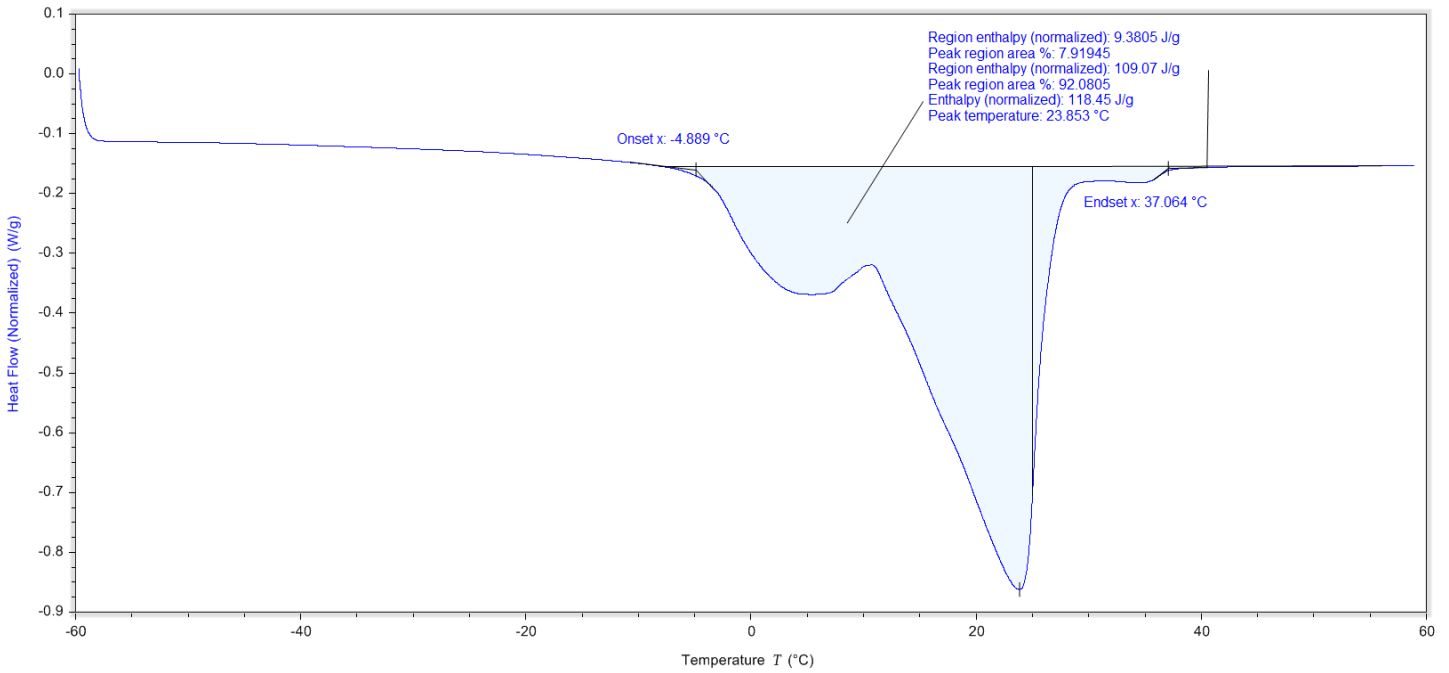
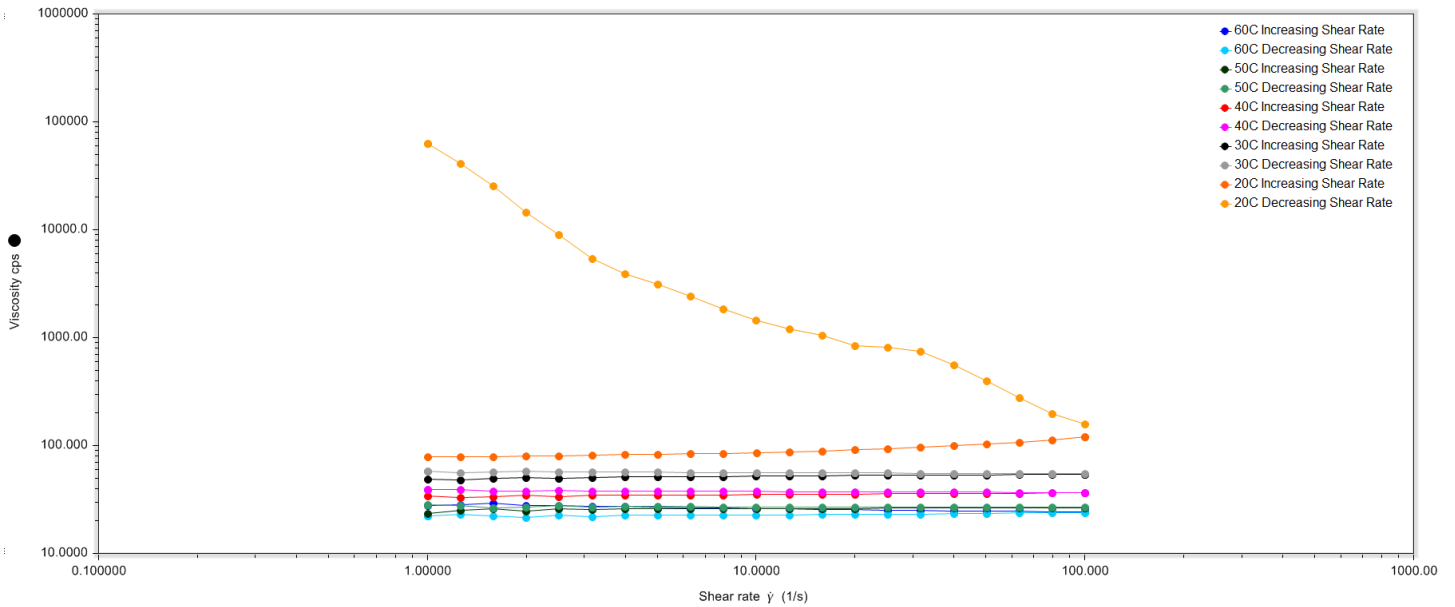


Figure 2: Rheology of BIO-SOFT® NC-10

BIO-SOFT® NC-10

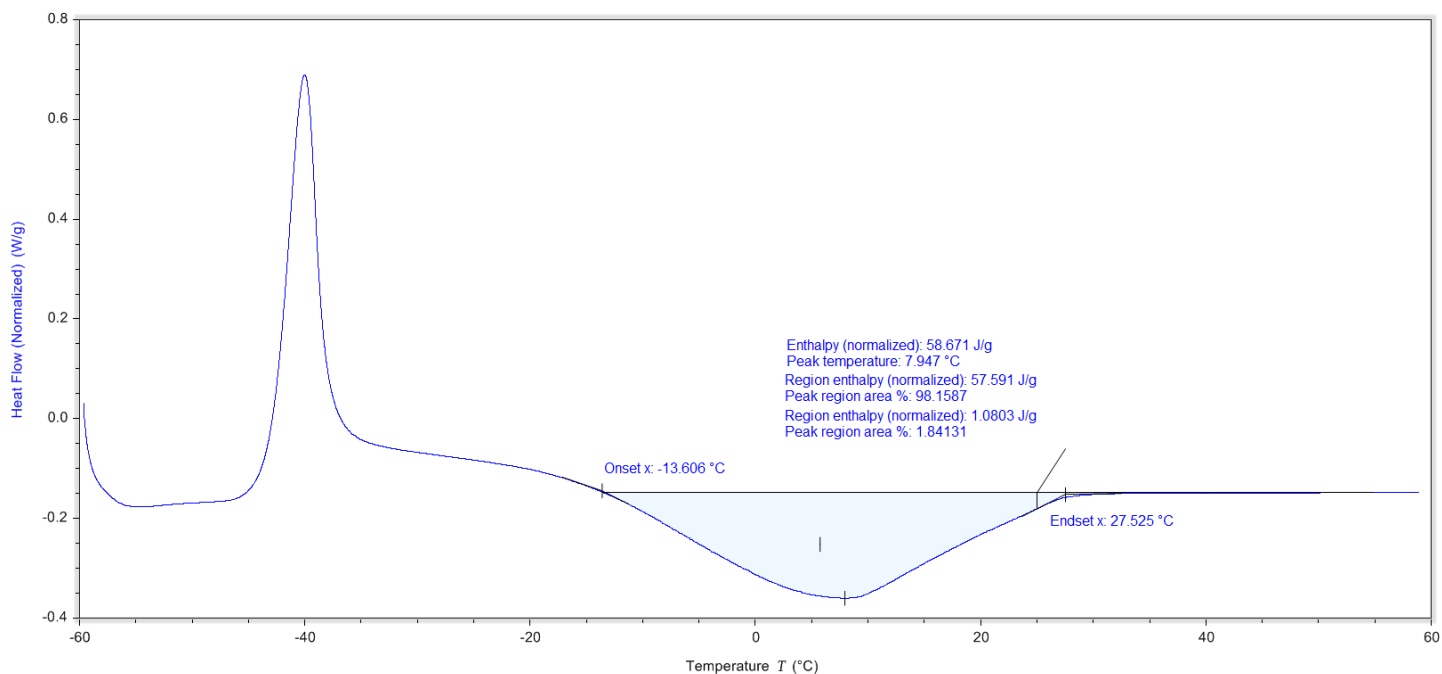


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Figure 3: Melt Point Determination of MAKON® TSP-25F

Melt Point, °C (°F)	Melt Range, °C (°F)	% Melted at 25°C (77°F)
27.53 (81.55)	-13.61 (7.50)– 27.53 (81.55)	98.16

MAKON® TSP-25F

**Figure 4: Rheology of MAKON® TSP-25F**

MAKON® TSP-25F

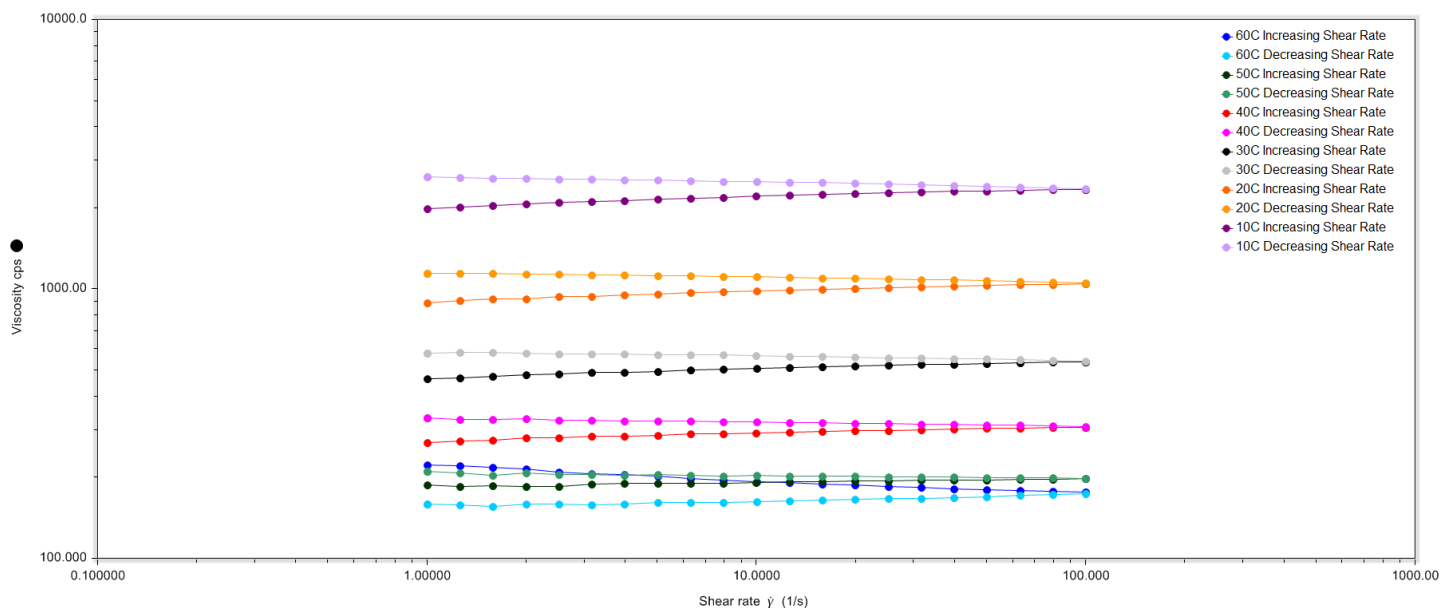


Figure 5: Melt Point Determination of MAKON® TSP-40F

Melt Point, °C (°F)	Melt Range, °C (°F)	% Melted at 25°C (77°F)
48.78 (119.80)	-5.50 (22.1) – 48.78 (119.80)	98.93

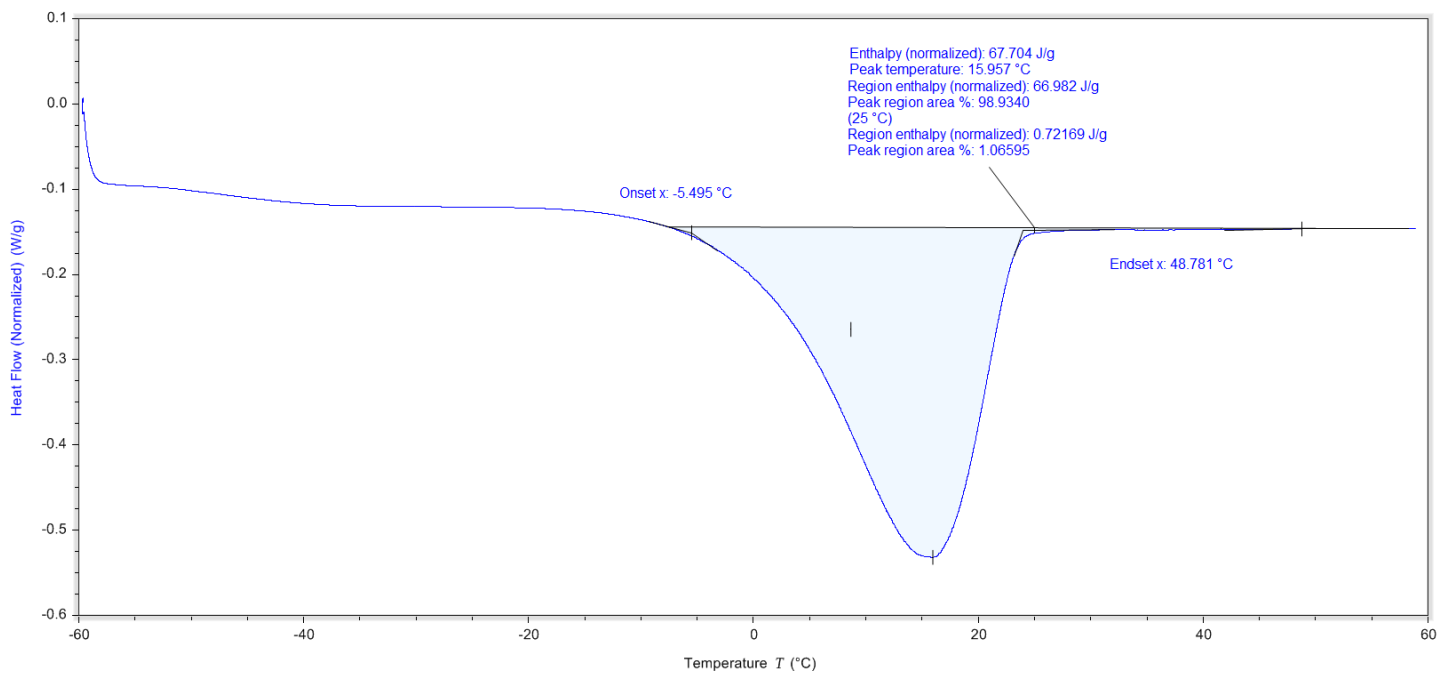
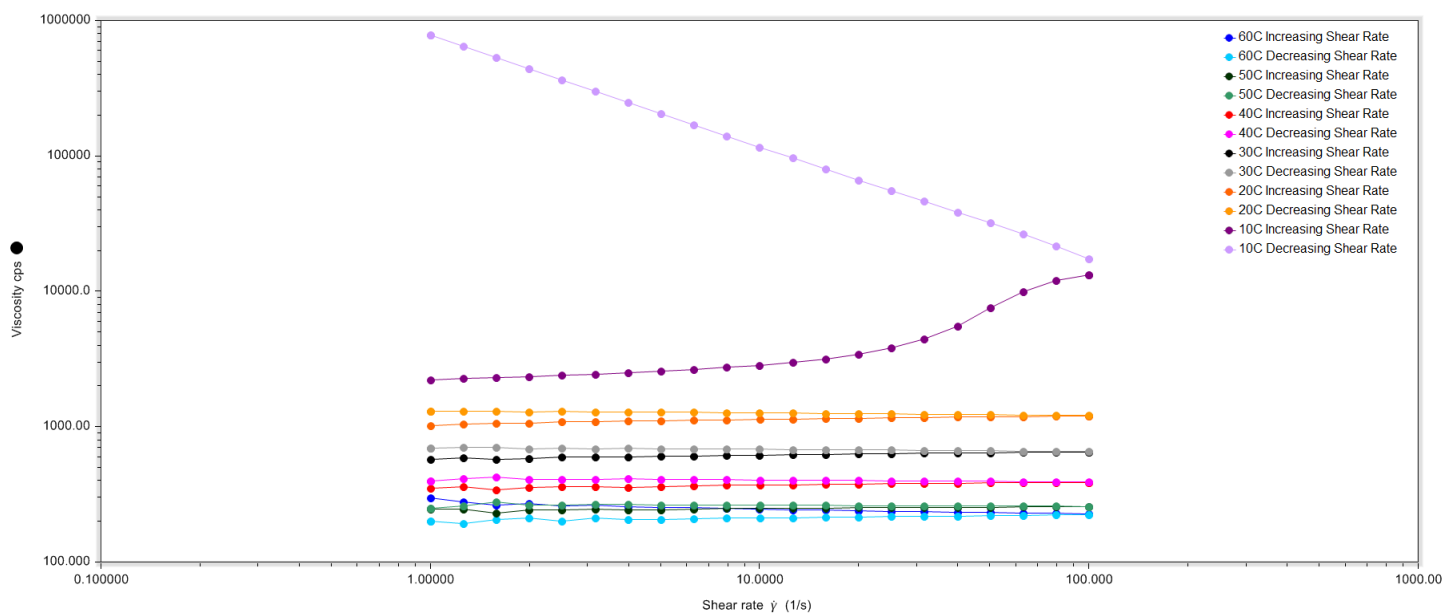
MAKON® TSP-40F**Figure 6: Rheology of MAKON® TSP-40F****MAKON® TSP-40F**

Figure 7: Melt Point Determination of MAKON® TSP-60F

Melt Point, °C (°F)	Melt Range, °C (°F)	% Melted at 25°C (77°)
34.60 (94.28)	-10.78 (12.6) – 34.60 (94.28)	71.48

MAKON® TSP-60F

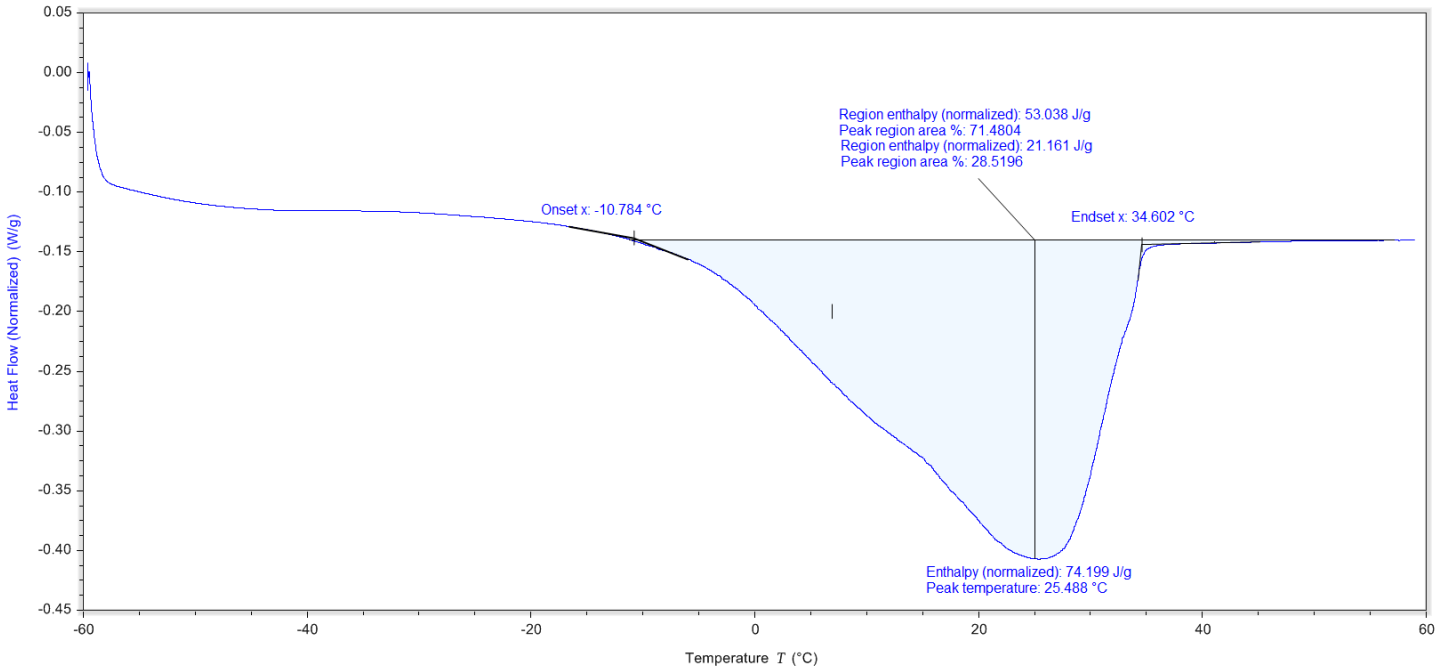
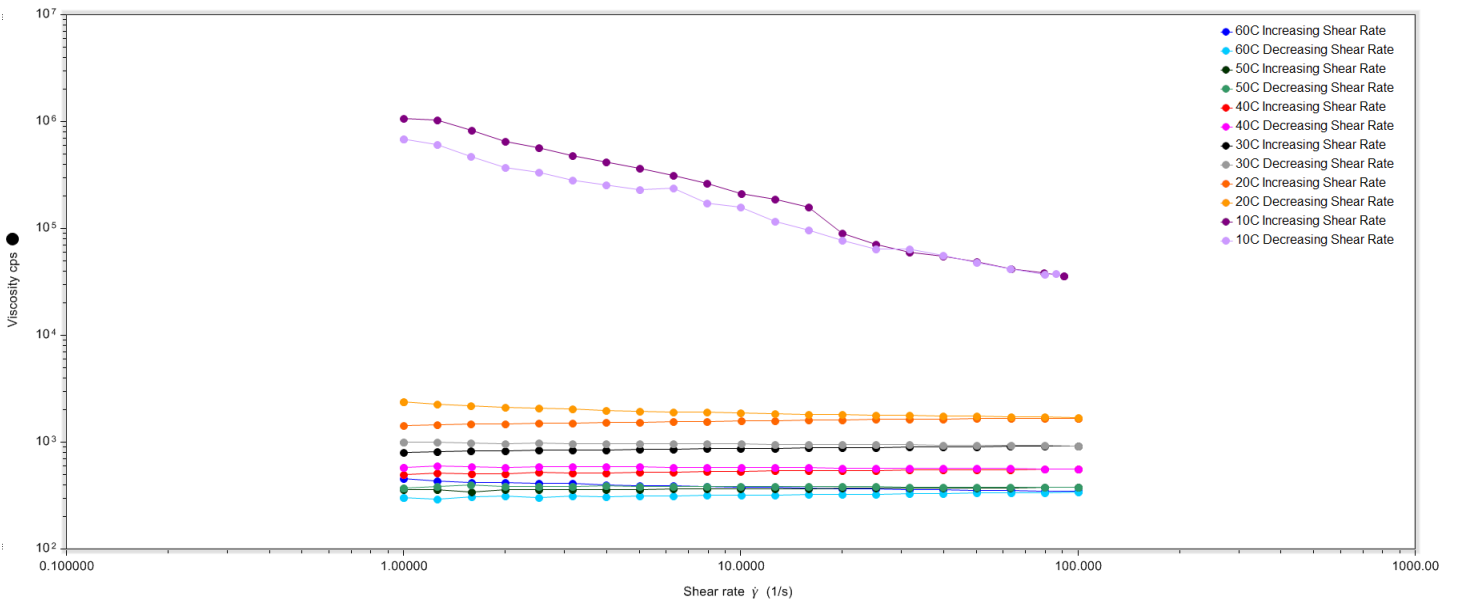


Figure 8: Rheology of MAKON® TSP-60F

MAKON® TSP-60F



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Figure 9: Melt Point Determination of TOXIMUL® 8000

Melt Point, °C (°F)	Melt Range, °C (°F)	% Melted at 25°C (77°F)
32.95 (91.31)	-30.80 (-23.44) – 32.95 (91.31)	98.59

TOXIMUL® 8000

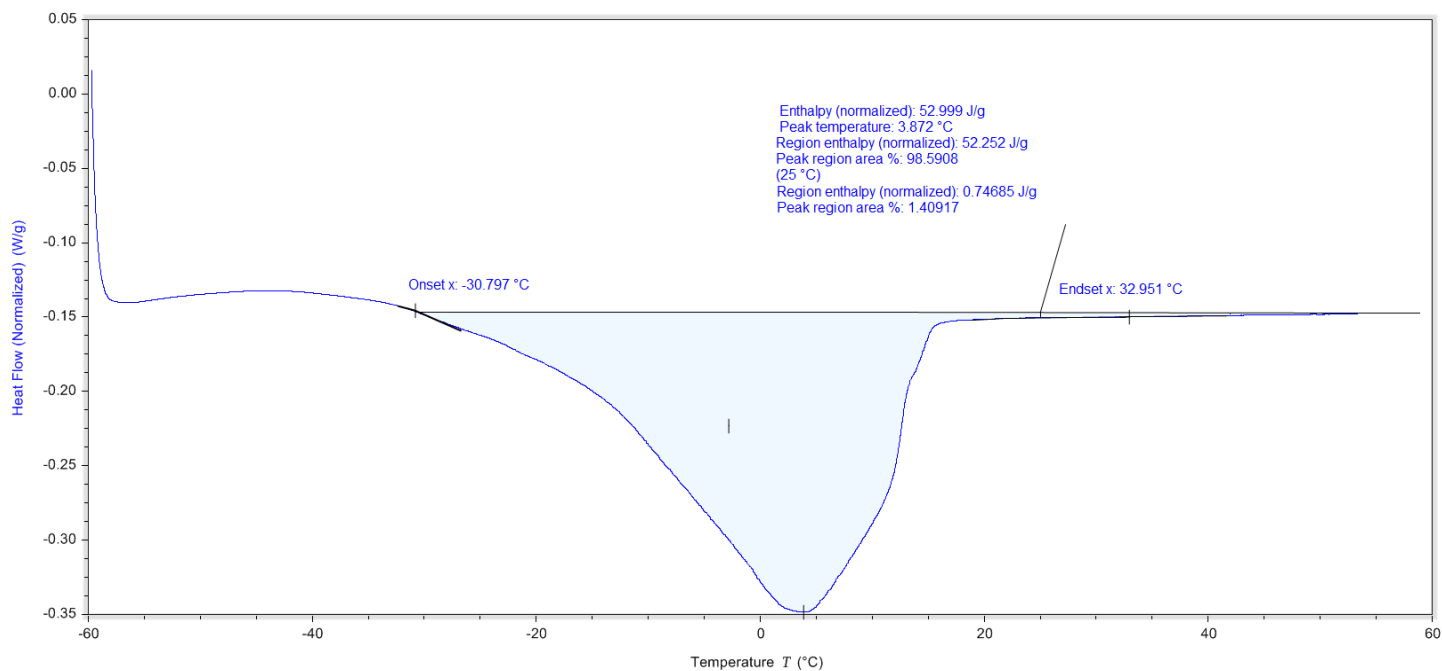


Figure 10: Rheology of TOXIMUL® 8000

TOXIMUL® 8000

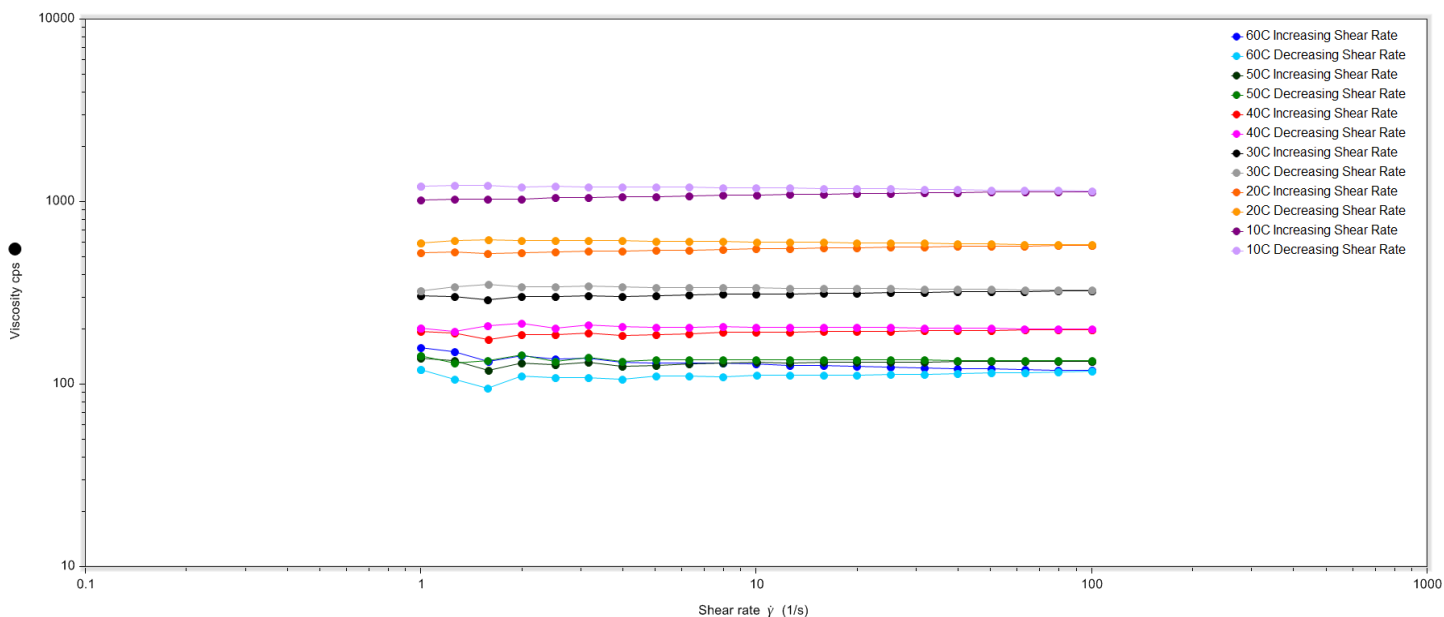


Figure 11: Melt Point Determination of TOXIMUL® 8315

Melt Point, °C (°F)	Melt Range, °C (°F)	% Melted at 25°C (77°F)
40.43 (104.77)	-34.86 (-30.75) – 40.43 (104.77)	97.13

TOXIMUL® 8315

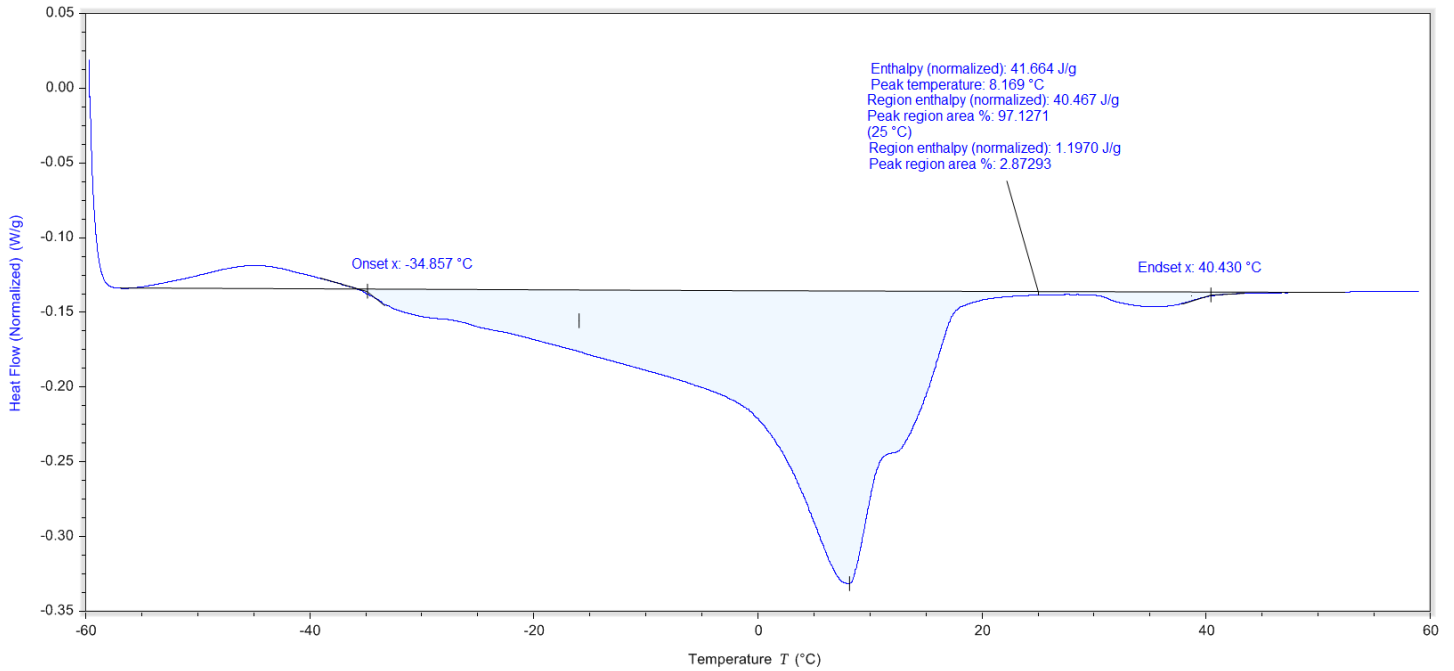


Figure 12: Rheology of TOXIMUL® 8315

TOXIMUL® 8315

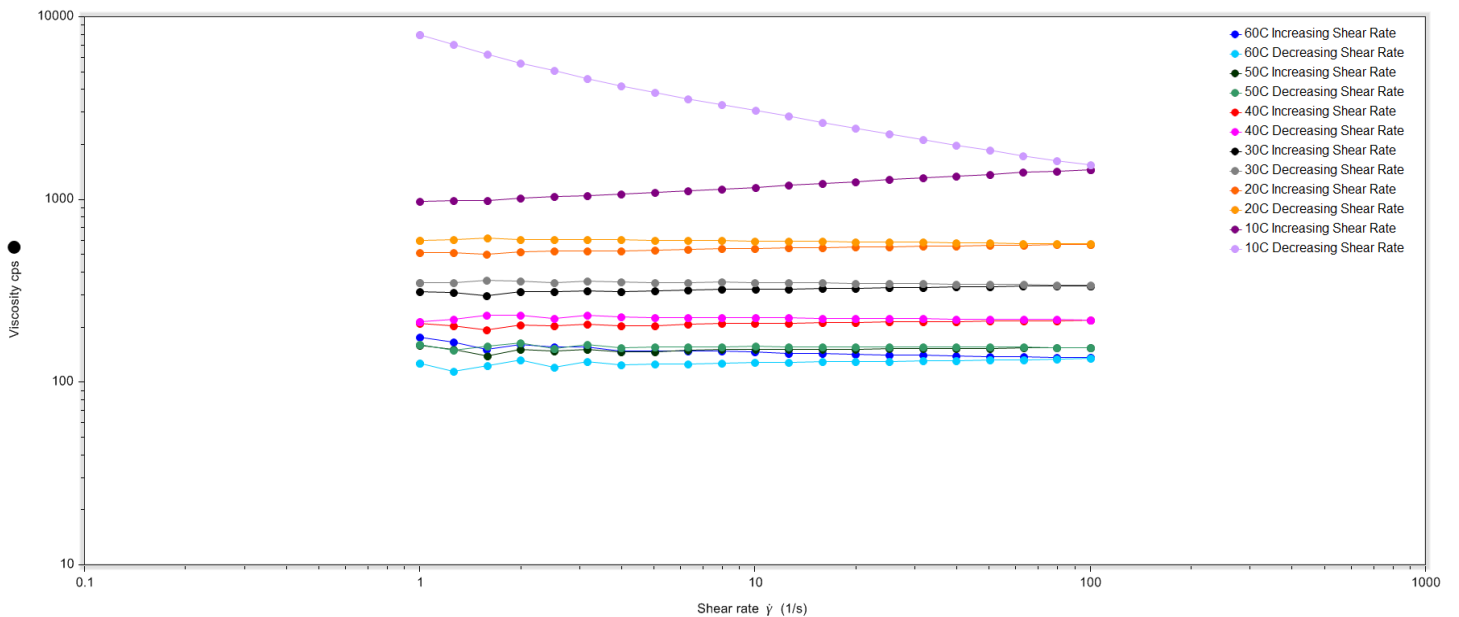


Figure 13: Melt Point Determination of TOXIMUL® 8320

Melt Point, °C (°F)	Melt Range, °C (°F)	% Melted at 25°C (77°F)
43.01 (109.42)	-16.08 (3.06) – 43.01 (109.42)	89.57

TOXIMUL® 8320

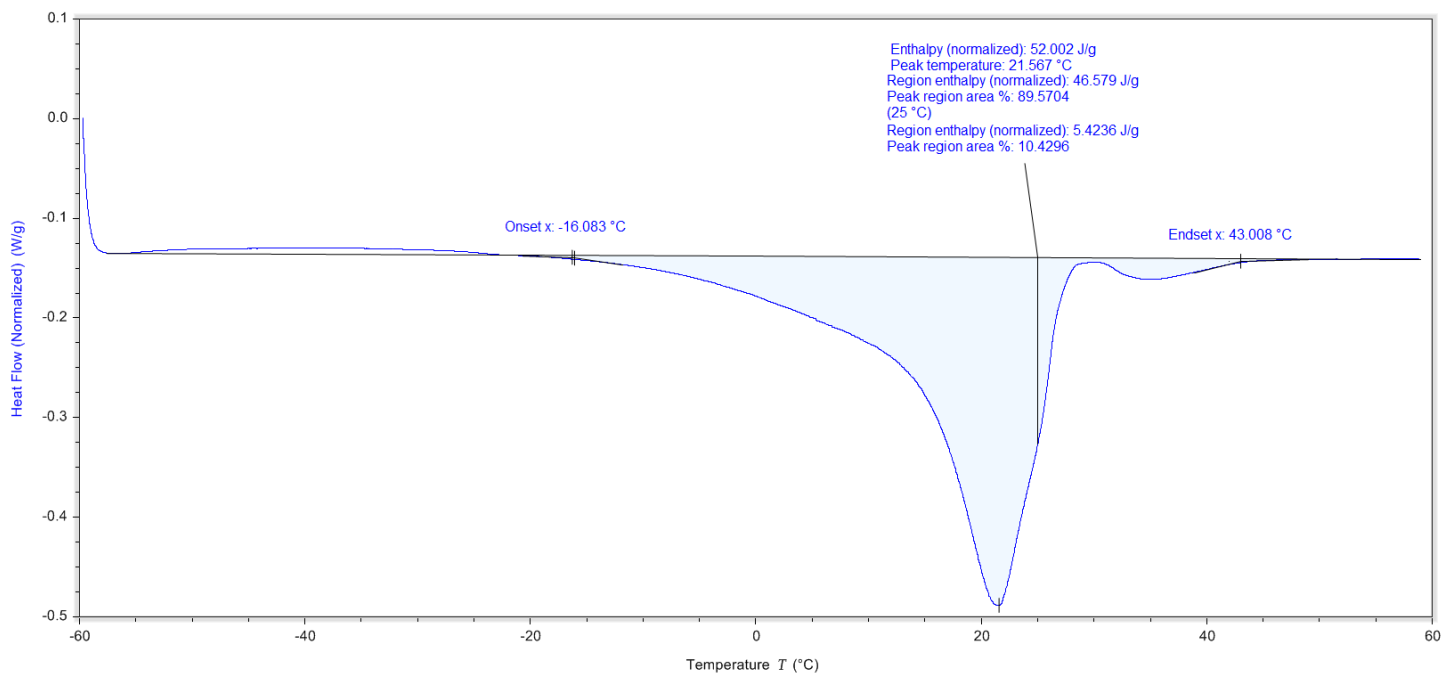


Figure 14: Rheology of TOXIMUL® 8320

TOXIMUL® 8320

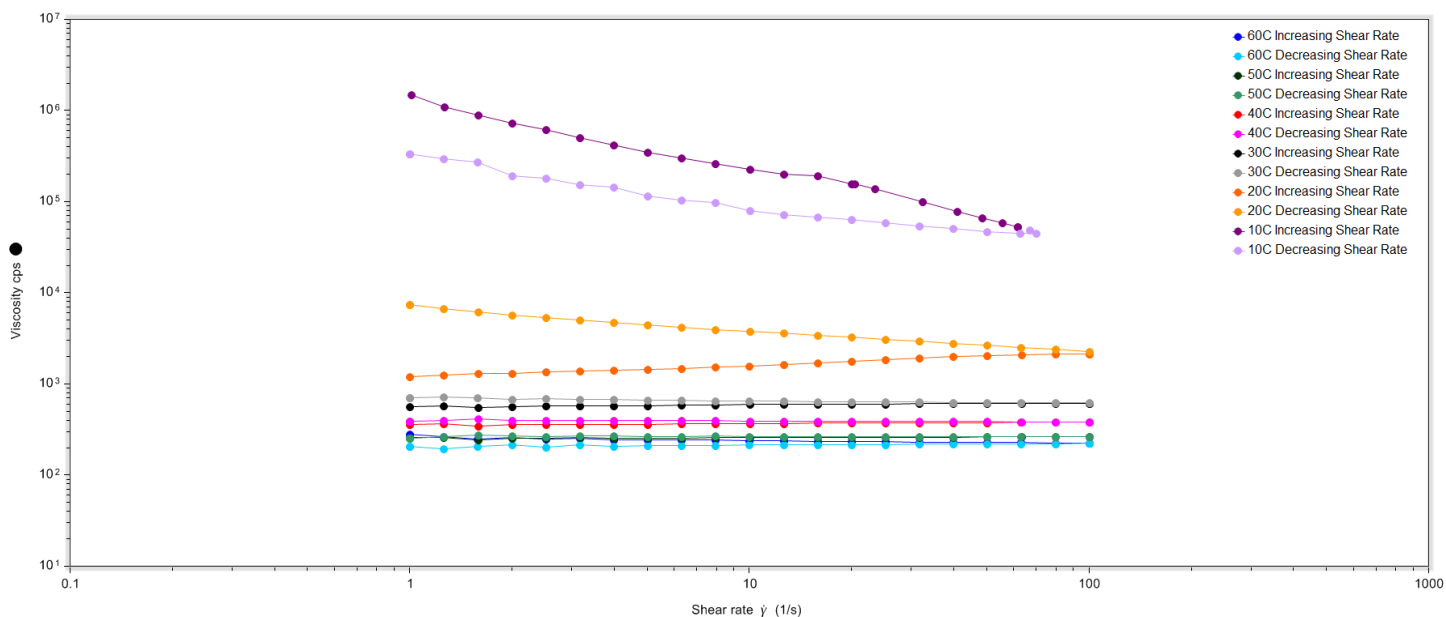


Figure 15: Melt Point Determination of TOXIMUL® 8322

Melt Point, °C (°F)	Melt Range, °C (°F)	% Melted at 25°C (77°C)
48.21 (118.78)	-6.96 (19.47) – 48.21 (118.78)	6.79

TOXIMUL® 8322

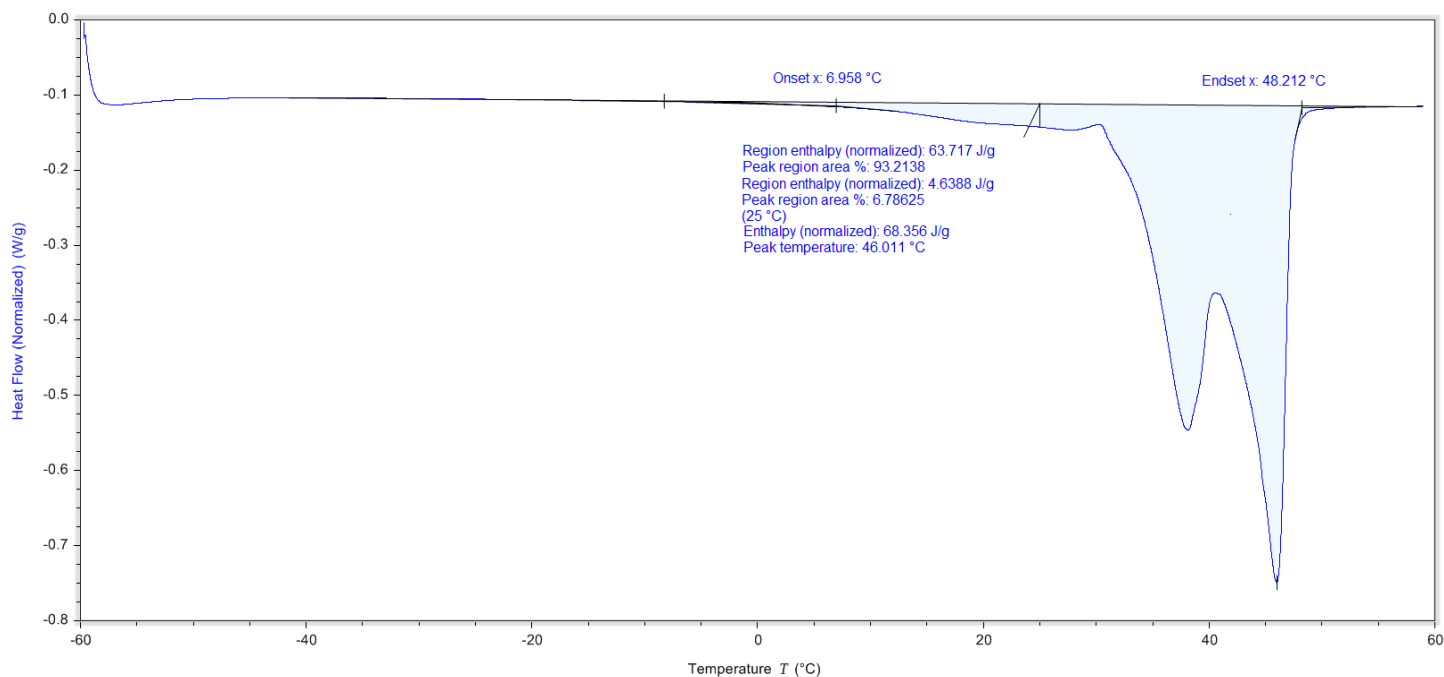


Figure 16: Rheology of TOXIMUL® 8322

TOXIMUL® 8322

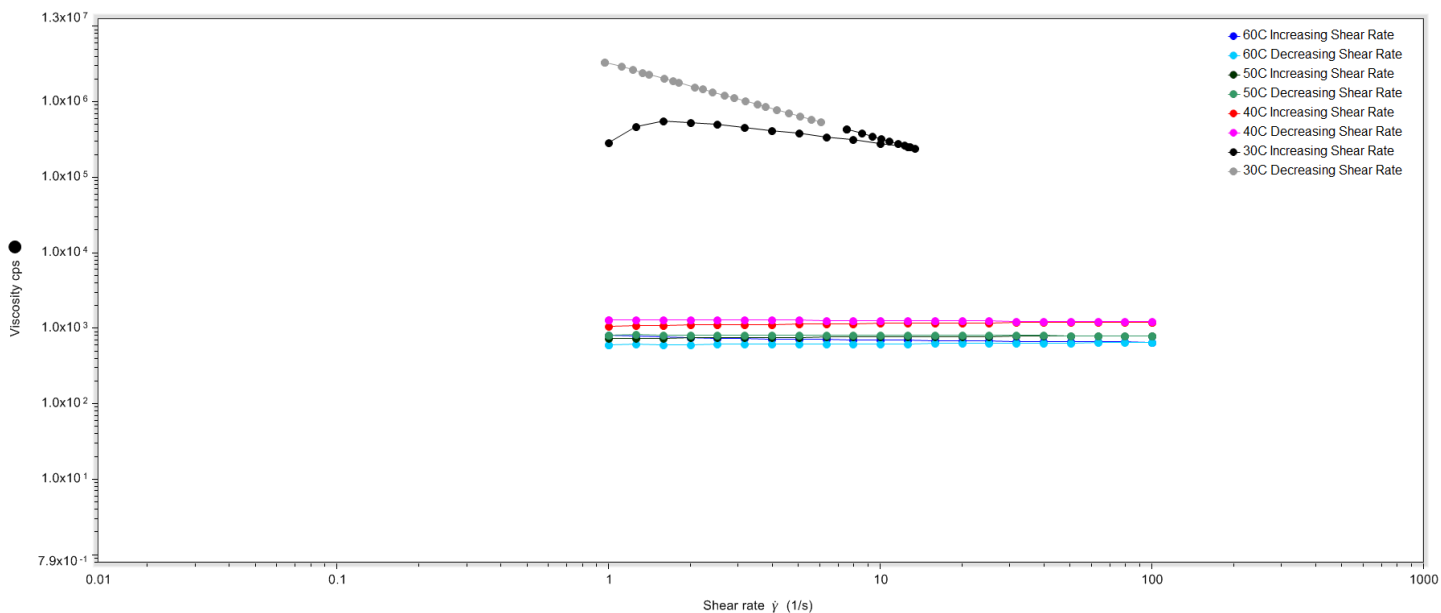


Figure 17: Melt Point Determination of TOXIMUL® 8325

Melt Point, °C (°F)	Melt Range, °C (°F)	% Melted at 25°C (77°F)
34.0 (93.2)	-31.09 (-23.96) – 34.0 (93.2)	97.74

TOXIMUL® 8325

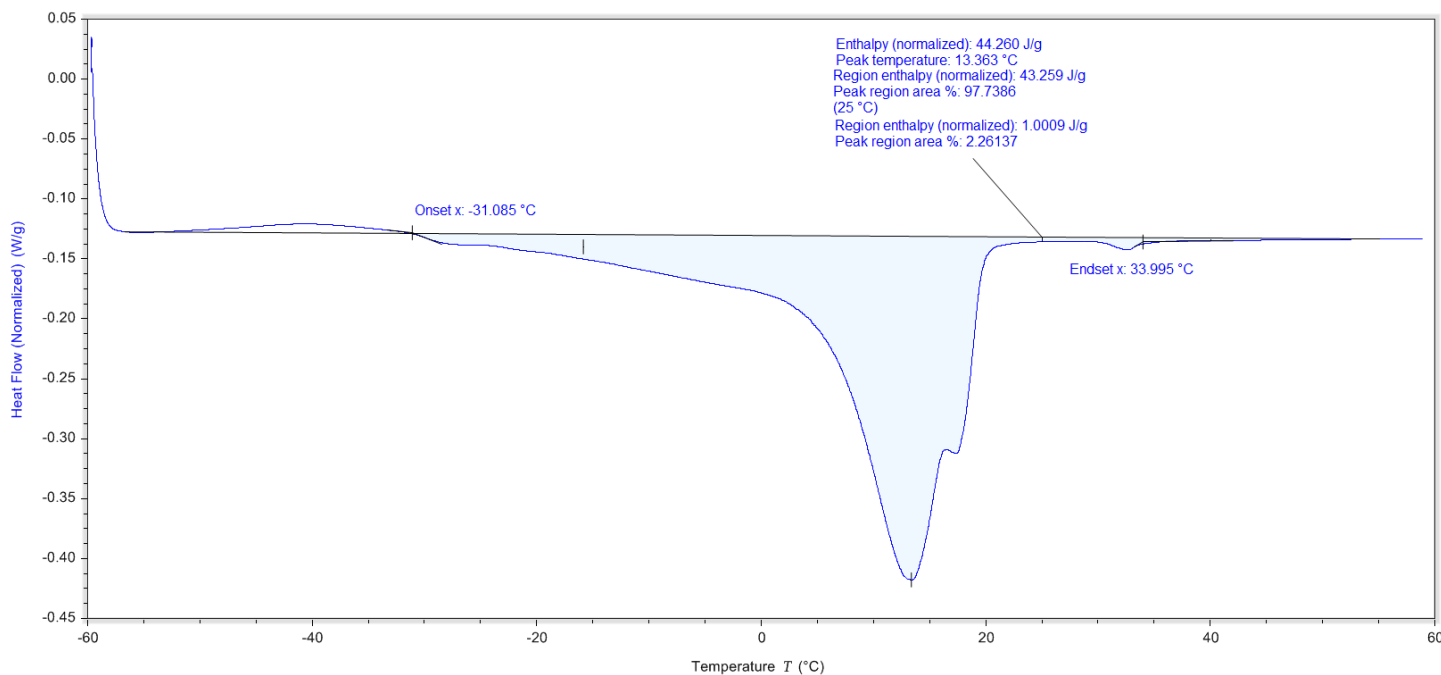


Figure 18: Rheology of TOXIMUL® 8325

TOXIMUL® 8325

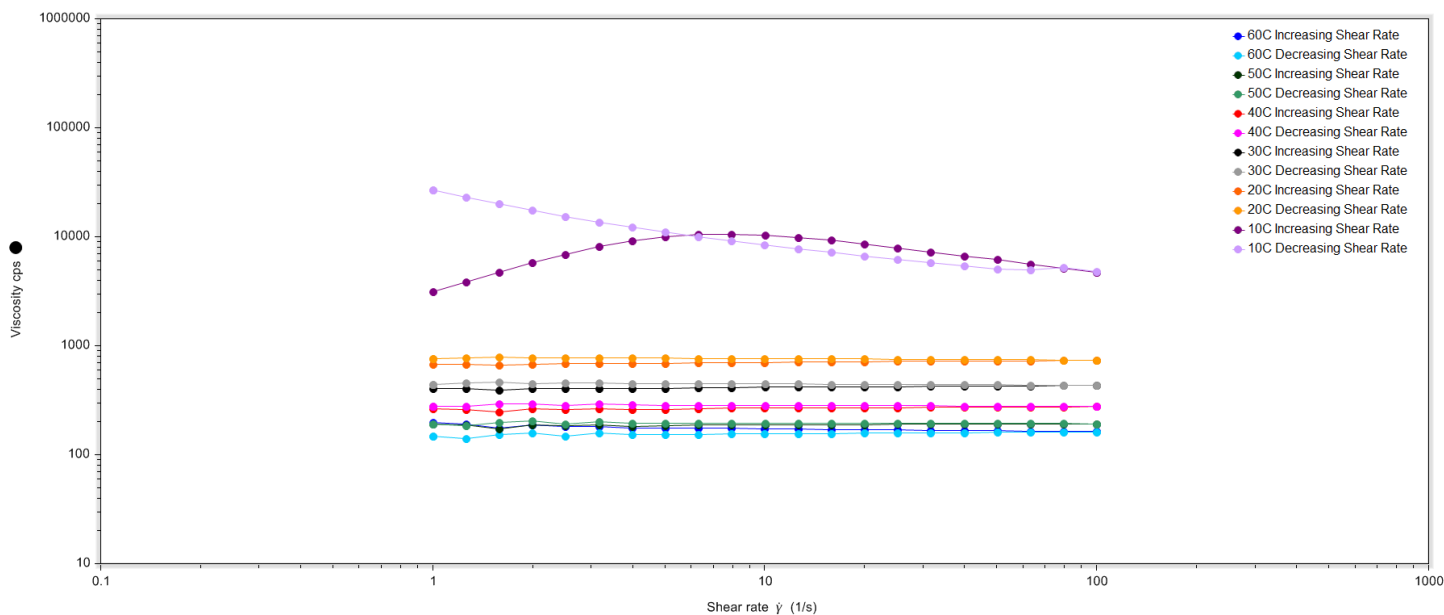


Figure 19: Melt Point Determination of TOXIMUL® 8350

Melt Point, °C (°F)	Melt Range, °C (°F)	% Melted at 25°C (77°F)
36.81 (98.26)	-29.46 (-21.03) – 36.81 (98.26)	82.11

TOXIMUL® 8350

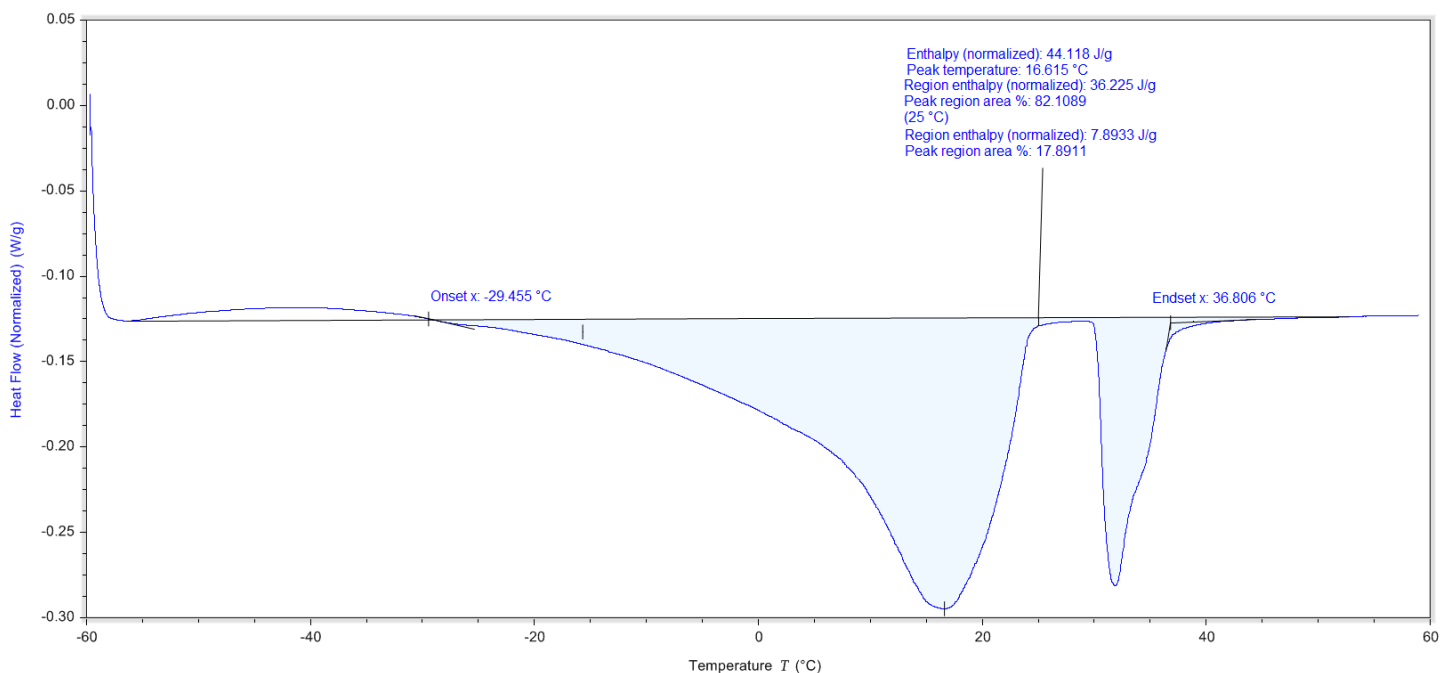


Figure 20: Rheology of TOXIMUL® 8350

TOXIMUL® 8350

