

Nano Activated Coatings Clearcoat

Physical Property Testing

Table 1: DMA Experimental Parameters

TA Instruments Q800 Unit	
Mode:	Tensile Film
Amplitude:	20 μ m
Frequency:	1 Hz
Clamping Force:	40 cNm
Temperature Cycle:	-50 to 200°C
Heating Rate:	3°C/min.
Sample Dimensions:	~13 x ~7 film thickness (mm)

Sample: Nano Activated Coatings Nano-Clear
Size: 14.9486 x 6.5600 x 0.0310 mm
Method: Std Tg and XLD

DMA

Instrument: DMA Q800 V7.5 Build 127

Results and Analysis

DMA

Panel	E' at 23°C (MPa)	XLD (Kmoles/c c)	Tg (°C)
NAC	2110	2.17	57.7

Based on historical data XLD has a 95% confidence interval of $\sim \pm 0.5$.

Based on historical data Tg has a 95% confidence interval of $\sim \pm 2.5$.

Uniaxial Extension (Instron)

Panel	Young's Modulus MPa	Yield Strain %	Yield Stress MPa	Stress at Break MPa	Strain at Break %	Toughness MPa
NAC	1506	4.59	51.6	52.7	52.4	5.09
95% CI +/-	35	0.14	1.6	1.3	1.5	0.59

Confidence intervals based on 5 tests of this sample.

