

## Eastman Neostar FN006 Elastomer

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyester TPE , Polyester, TP

### Material Notes:

Neostar FN006 elastomer is the second in Eastman's series of tough, clear, durable copolyester ethers. Developed for use in the profile and automotive markets, it can also be used in packaging and tubing applications. Its chemical resistance, flexibility, and toughness make it an ideal choice for applications where strength, durability, and puncture resistance in harsh environments is required. Neostar FN006 can be used in injection molding or cast film, blown film, or tubing extrusion applications. This copolyester has a full range of flexibility and memory without the addition of plasticizers. Considered environmentally preferred due to its non-halogenated material composition, it can be incinerated cleanly without the emission of toxic gases. The target inherent viscosity of this product is

1.6.Applications/UsesAutomotiveFlexible hingesPricing channelsRetail pricing finsDriver and passenger side air

bagsPackagingProfilesTubingKey AttributesEnvironmentally preferred, non-halogenated materialExcellent chemical resistanceExceptional heat resistance and high temperature dimensional stabilityHigh flexibility without plasticizersSolvent bondable

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Eastman-Neostar-FN006-Elastomer.php](http://www.lookpolymers.com/polymer_Eastman-Neostar-FN006-Elastomer.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.13 g/cc	1.13 g/cc	ASTM D792
Water Absorption	0.40 %	0.40 %	24h Immersion; ASTM D570
Viscosity Measurement	1.16	1.16	Inherent; EMN-A-AC-G-V-1
Melt Flow	10 g/10 min @Load 2.16 kg, Temperature 230 °C	10 g/10 min @Load 4.76 lb, Temperature 446 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	95	95	ASTM D2240
Hardness, Shore D	55	55	ASTM D2240
Tensile Strength at Break	22.0 MPa	3190 psi	ASTM D638
Tensile Strength, Yield	14.0 MPa	2030 psi	ASTM D638
Elongation at Break	400 %	400 %	ASTM D638
Elongation at Yield	38 %	38 %	ASTM D638
Tensile Modulus	0.170 GPa	24.7 ksi	ASTM D638
Flexural Modulus	0.150 GPa	21.8 ksi	ASTM D790
Izod Impact, Notched	0.400 J/cm @Temperature -40.0 °C	0.749 ft-lb/in @Temperature -40.0 °F	ASTM D256

Mechanical Properties	Metric	English	Comments
Tear Strength, Total	350 N	78.7 lb (f)	ASTM D1004

Thermal Properties	Metric	English	Comments
Heat of Fusion	27.0 J/g	11.6 BTU/lb	ASTM E793
CTE, linear	150 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	83.3 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM D696
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
Specific Heat Capacity	1.60 J/g- $^{\circ}\text{C}$	0.382 BTU/lb- $^{\circ}\text{F}$	DSC
	1.80 J/g- $^{\circ}\text{C}$	0.430 BTU/lb- $^{\circ}\text{F}$	DSC
	@Temperature 100 $^{\circ}\text{C}$	@Temperature 212 $^{\circ}\text{F}$	
	2.00 J/g- $^{\circ}\text{C}$	0.478 BTU/lb- $^{\circ}\text{F}$	DSC
	@Temperature 150 $^{\circ}\text{C}$	@Temperature 302 $^{\circ}\text{F}$	
	2.30 J/g- $^{\circ}\text{C}$	0.550 BTU/lb- $^{\circ}\text{F}$	solid; DSC
	@Temperature 175 $^{\circ}\text{C}$	@Temperature 347 $^{\circ}\text{F}$	
	2.30 J/g- $^{\circ}\text{C}$	0.550 BTU/lb- $^{\circ}\text{F}$	melt; DSC
	@Temperature 225 $^{\circ}\text{C}$	@Temperature 437 $^{\circ}\text{F}$	
	3.10 J/g- $^{\circ}\text{C}$	0.741 BTU/lb- $^{\circ}\text{F}$	transition; DSC
	@Temperature 200 $^{\circ}\text{C}$	@Temperature 392 $^{\circ}\text{F}$	
Thermal Conductivity	0.190 W/m-K	1.32 BTU-in/hr-ft <sup>2</sup> - $^{\circ}\text{F}$	ASTM C177
Melting Point	205 $^{\circ}\text{C}$	401 $^{\circ}\text{F}$	Crystalline Peak Melting Point; ASTM D3418
Crystallization Temperature	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	on cooling; DSC
Vicat Softening Point	170 $^{\circ}\text{C}$	338 $^{\circ}\text{F}$	1kg load; ASTM D1525
Brittleness Temperature	$\leq -75.0$ $^{\circ}\text{C}$	$\leq -103$ $^{\circ}\text{F}$	ASTM D746
Glass Transition Temp, Tg	-3.00 $^{\circ}\text{C}$	26.6 $^{\circ}\text{F}$	DSC
Clash Berg Stiffness Temperature	$\leq -70.0$ $^{\circ}\text{C}$	$\leq -94.0$ $^{\circ}\text{F}$	at 930 MPa; ASTM D1043
	-28.0 $^{\circ}\text{C}$	-18.4 $^{\circ}\text{F}$	at 240 MPa; ASTM D1043

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