

Envalior Durethan AKV 15 FN000

PA 66, 12% glass fibers, injection molding, halogen free flame retardant
Former Lanxess product line is now with Envalior.

Physical Properties	Metric	English	Comments
Density	1.275 g/cc	0.04606 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	1.8 %	1.8 %	50% RH; ISO 62
Water Absorption at Saturation	5.5 %	5.5 %	ISO 62
Linear Mold Shrinkage, Flow	0.0060 cm/cm	0.0060 in/in	60x60x2; 270 °C / WZ 80°C; 600 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	60x60x2; 270 °C / WZ 80°C; 600 bar; ISO 294-4
Melt Flow	25 g/10 min @Load 2.16 kg, Temperature 270 °C	25 g/10 min @Load 4.76 lb, Temperature 518 °F	ISO 1133-1

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	90.0 MPa	13100 psi	5 mm/min; ISO 527-1,-2
Elongation at Break	3.3 %	3.3 %	5 mm/min; ISO 527-1,-2
Tensile Modulus	6.50 GPa	943 ksi	1 mm/min; ISO 527-1,-2
Flexural Strength	150 MPa	21800 psi	2 mm/min; ISO 178-A
Flexural Modulus	6.40 GPa	928 ksi	2 mm/min; ISO 178-A
Flexural Strain at Break	3.3 %	3.3 %	2 mm/min; ISO 178-A
Izod Impact, Notched (ISO)	<= 10.0 kJ/m ² @Temperature 23.0 °C	<= 4.76 ft-lb/in ² @Temperature 73.4 °F	ISO 180-1A
Izod Impact, Unnotched (ISO)	35.0 kJ/m ² @Temperature 23.0 °C	16.7 ft-lb/in ² @Temperature 73.4 °F	ISO 180-1U
Charpy Impact Unnotched	4.00 J/cm ² @Temperature 23.0 °C	19.0 ft-lb/in ² @Temperature 73.4 °F	ISO 179-1eU

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	0.00 V	0.00 V	Solution A; UL 746A

Thermal Properties	Metric	English	Comments
Melting Point	262 °C	504 °F	10°C/min; ISO 11357-1,-3
Deflection Temperature at 0.46 MPa (66 psi)	245 °C	473 °F	ISO 75-1,-2
Deflection Temperature at 1.8 MPa (264 psi)	205 °C	401 °F	ISO 75-1,-2

Vicat Softening Point	225 °C @Load 5.10 kg	437 °F @Load 11.2 lb	120°C/h; ISO 306
Flammability, UL94	V-0 @Thickness 0.400 mm	V-0 @Thickness 0.0157 in	
	V-0 @Thickness 0.750 mm	V-0 @Thickness 0.0295 in	
	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	
	V-0 @Thickness 3.00 mm	V-0 @Thickness 0.118 in	
Glow Wire Flammability Index	960 °C @Thickness 0.400 mm	1760 °F @Thickness 0.0157 in	IEC 60695-2-12
	960 °C @Thickness 0.800 mm	1760 °F @Thickness 0.0315 in	IEC 60695-2-12
	960 °C @Thickness 1.50 mm	1760 °F @Thickness 0.0591 in	IEC 60695-2-12
	960 °C @Thickness 3.00 mm	1760 °F @Thickness 0.118 in	IEC 60695-2-12
Shrinkage, MD	0.10 % @Treatment Temp. 120 °C, Time 14400 sec	0.10 % @Treatment Temp. 248 °F, Time 4.00 hour	Flow Direction Post-Molding, 60x60x2; ISO 294-4
Shrinkage, TD	0.10 % @Treatment Temp. 120 °C, Time 14400 sec	0.10 % @Treatment Temp. 248 °F, Time 4.00 hour	Post-Molding, 60x60x2; ISO 294-4

Processing Properties	Metric	English	Comments
Melt Temperature	270 °C	518 °F	injection molding; ISO 294
	265 - 285 °C	509 - 545 °F	
Mold Temperature	80.0 °C	176 °F	injection molding; ISO 294
	80.0 - 100 °C	176 - 212 °F	
Drying Temperature	80.0 °C	176 °F	
Dry Time	2.00 - 6.00 hour	2.00 - 6.00 hour	
Moisture Content	0.030 - 0.070 %	0.030 - 0.070 %	Karl Fischer