Toyobo GLAMIDE® T-803 Nylon-6

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, Unreinforced, Flame Retardant

Material Notes:

GLAMIDE® is very tough and exhibits high abrasion resistance. It has a high melting point and heat resistance, has well-balanced proportions of mechanical properties, performs self-distinguishing and a specific grade approved as UL94V-0 class is provided, and it exhibits excellent chemical resistance and oil resistance. Grade T-803 is a hard type, non-reinforced Nylon-6 used in high-cycles.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Toyobo-GLAMIDE-T-803-Nylon-6.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.14 g/cc	1.14 g/cc	Absolute Drying; ASTM-D792
Water Absorption	1.8 %	1.8 %	Absolute Drying; ASTM-D570
Moisture Absorption at Equilibrium	3.5 %	3.5 %	Absolute Drying; ASTM-D570
Linear Mold Shrinkage	0.0040 - 0.0070 cm/cm @Thickness 1.00 mm	0.0040 - 0.0070 in/in @Thickness 0.0394 in	Absolute Drying
	0.012 - 0.014 cm/cm @Thickness 3.00 mm	0.012 - 0.014 in/in @Thickness 0.118 in	Absolute Drying
Melt Flow	44 g/10 min	44 g/10 min	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	Absolute Drying; ASTM-D785
Tensile Strength, Ultimate	25.0 MPa @Temperature 80.0 °C	3630 psi @Temperature 176 °F	Practical Use (Water Absorption 3.5%); ASTM-D638
	35.0 MPa @Temperature 80.0 °C	5080 psi @Temperature 176 °F	Absolute Drying; ASTM-D638
	45.0 MPa @Temperature 23.0 °C	6530 psi @Temperature 73.4 °F	Practical Use (Water Absorption 3.5%); ASTM-D638
	90.0 MPa @Temperature 23.0 °C	13100 psi @Temperature 73.4 °F	Absolute Drying; ASTM-D638
	110 MPa @Temperature -40.0 °C	16000 psi @Temperature -40.0 °F	Practical Use (Water Absorption 3.5%); ASTM-D638
	120 MPa	17400 psi	Absolute Drying; ASTM-D638

Mechanical Properties	Metric	English	Comments
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Elongation at Break	30 %	30 %	Absolute Drying; ASTM-D638
	>= 200 %	>= 200 %	Practical Use (Water Absorption 3.5%); ASTM-D638
Flexural Strength	30.0 MPa @Temperature 80.0 °C	4350 psi @Temperature 176 °F	Practical Use (Water Absorption 3.5%); ASTM-D790
	49.0 MPa @Temperature 23.0 °C	7110 psi @Temperature 73.4 °F	Practical Use (Water Absorption 3.5%); ASTM-D790
	55.0 MPa @Temperature 80.0 °C	7980 psi @Temperature 176 °F	Absolute Drying; ASTM-D790
	113 MPa @Temperature 23.0 °C	16400 psi @Temperature 73.4 °F	Absolute Drying; ASTM-D790
	125 MPa @Temperature -40.0 °C	18100 psi @Temperature -40.0 °F	Practical Use (Water Absorption 3.5%); ASTM-D790
	140 MPa @Temperature -40.0 °C	20300 psi @Temperature -40.0 °F	Absolute Drying; ASTM-D790
Flexural Modulus	0.500 GPa @Temperature 80.0 °C	72.5 ksi @Temperature 176 °F	Practical Use (Water Absorption 3.5%); ASTM-D790
	0.900 GPa @Temperature 80.0 °C	131 ksi @Temperature 176 °F	Absolute Drying; ASTM-D790
	1.10 GPa @Temperature 23.0 °C	160 ksi @Temperature 73.4 °F	Practical Use (Water Absorption 3.5%); ASTM-D790
	3.20 GPa @Temperature 23.0 °C	464 ksi @Temperature 73.4 °F	Absolute Drying; ASTM-D790
	3.60 GPa @Temperature -40.0 °C	522 ksi @Temperature -40.0 °F	Practical Use (Water Absorption 3.5%); ASTM-D790
	4.00 GPa @Temperature -40.0 °C	580 ksi @Temperature -40.0 °F	Absolute Drying; ASTM-D790
Compressive Strength	85.0 MPa	12300 psi	Absolute Drying; ASTM-D695
Izod Impact, Notched	0.300 J/cm @Temperature -40.0 °C	0.562 ft-lb/in @Temperature -40.0 °F	Absolute Drying; ASTM-D256

Mechanical Properties	Metric	English	Comments
	0.450 J/cm @Temperature -40.0 °C	0.843 ft-lb/in @Temperature -40.0 °F	Practical Use (Water Absorption 3.5%); ASTM-D256
	0.500 J/cm @Temperature 23.0 °C	0.937 ft-lb/in @Temperature 73.4 °F	Absolute Drying; ASTM-D256
	3.90 J/cm @Temperature 23.0 °C	7.31 ft-lb/in @Temperature 73.4 °F	Practical Use (Water Absorption 3.5%); ASTM-D256
Taber Abrasion, mg/1000 Cycles	5.0	5.0	CS-17, Absolute Drying; ASTM-D1044

Thermal Properties	Metric	English	Comments
CTE, linear	83.0 µm/m-°C	46.1 µin/in-°F	Absolute Drying; ASTM-D696
Deflection Temperature at 0.46 MPa (66 psi)	180 °C	356 °F	Absolute Drying; ASTM-D648
Deflection Temperature at 1.8 MPa (264 psi)	75.0 °C	167 °F	Absolute Drying; ASTM-D648
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+8 - 1.00e+9 ohm-cm	1.00e+8 - 1.00e+9 ohm-cm	Practical Use (Water Absorption 3.5%); ASTM-D257
	1.00e+12 ohm-cm	1.00e+12 ohm-cm	Absolute Drying; ASTM-D257
Dielectric Constant	3.8 @Frequency 1000 Hz	3.8 @Frequency 1000 Hz	Absolute Drying; ASTM-D150
	8.0 @Frequency 1000 Hz	8.0 @Frequency 1000 Hz	Practical Use (Water Absorption 3.5%); ASTM-D150
Dielectric Strength	12.0 kV/mm @Thickness 2.00 mm	305 kV/in @Thickness 0.0787 in	Practical Use (Water Absorption 3.5%); ASTM-D149
	18.0 kV/mm @Thickness 2.00 mm	457 kV/in @Thickness 0.0787 in	Absolute Drying; ASTM-D149
Dissipation Factor	0.020 @Frequency 1000 Hz	0.020 @Frequency 1000 Hz	Absolute Drying; ASTM-D150
Arc Resistance	105 sec	105 sec	Practical Use (Water Absorption 3.5%); ASTM-D495
	125 sec	125 sec	Absolute Drying; ASTM-D495
Comparative Tracking Index	>= 600 V	>= 600 V	IEC Method

Electrical Properties	Metric	English	Comments
Processing Properties	**Metric**	**English**	**Comments**
Melt Temperature	240 - 260 °C	464 - 500 °F	
Mold Temperature	80.0 °C	176 °F	
Injection Pressure	30.0 - 40.0 MPa	4350 - 5800 psi	

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