

TOYOBO Nylon T-656E

Polyamide 66

TOYOBO America, Inc.

General				
Manufacturer / Supplier	• TOYOBO America, Inc.			
Generic Symbol	• Nylon 66			
Material Status	• Commercial: Active			
Availability	• North America			
Features	• Good Abrasion Resistance			
Forms	• Pellets			
Physical	Test Method	Unit	Dry	Conditioned
Specific Gravity	ASTM D792	g/cm ³	1.12	--
Molding Shrinkage - Flow	ASTM D955			
1.00 mm		%	0.60 to 1.2	--
3.00 mm		%	1.5 to 2.2	--
Water Absorption	ASTM D570			
24 hr		%	1.1	--
Equilibrium, 65% RH		%	2.4	--
Mechanical	Test Method	Unit	Dry	Conditioned
Tensile Strength	ASTM D638			
Yield, -40°C		MPa	95.0	90.0
Yield, 23°C		MPa	70.0	45.0
Yield, 80°C		MPa	30.0	24.0
Tensile Elongation (Break, 23°C)	ASTM D638	%	52	200
Flexural Modulus	ASTM D790			
-40°C		MPa	3100	2900
23°C		MPa	2700	1300
80°C		MPa	800	400
Flexural Strength	ASTM D790			
Yield, -40°C		MPa	125	115
Yield, 23°C		MPa	96.0	70.0
Yield, 80°C		MPa	50.0	38.0
Taber Abrasion Resistance	ASTM D1044			
1000 Cycles, CS-17 Wheel		mg	5.00	--
Impact	Test Method	Unit	Dry	Conditioned
Notched Izod Impact	ASTM D256			
-40°C		J/m	100	130
23°C		J/m	145	400
Hardness	Test Method	Unit	Dry	Conditioned
Rockwell Hardness (R-Scale)	ASTM D785		118	--
Thermal	Test Method	Unit	Dry	Conditioned
Deflection Temperature Under Load	ASTM D648			
0.45 MPa, Unannealed		°C	215	--
1.8 MPa, Unannealed		°C	68.0	--
Electrical	Test Method	Unit	Dry	Conditioned
Volume Resistivity	ASTM D257	ohm-cm	1.0E+15	1.0E+13
Dielectric Strength (2.00 mm)	ASTM D149	kV/mm	21	14
Arc Resistance	ASTM D495	sec	120	110
Comparative Tracking Index	IEC 60112	V	600	600
Flammability	Test Method	Unit	Dry	Conditioned
Flame Rating - UL	UL 94		HB	--
Additional Information				
Dry	Comparative Tracking Index, IEC Method: >600 V			
Conditioned	Tensile Elongation, ASTM D638, 23°C: >200 % Notched Izod Impact Strength, ASTM D256, 23°C: >400 J/m Volume Resistivity, ASTM D257: 1e10 to 1e11 ohm-m Comparative Tracking Index, IEC Method: >600 V			



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Injection	Nominal Value	Unit
Processing (Melt) Temp	270 to 290	°C
Mold Temperature	40.0 to 80.0	°C
Injection Pressure	30.0 to 40.0	MPa

Notes

¹ Typical properties: these are not to be construed as specifications.

