

PA6 CAST vs. PA6/6

PROPERTY	UNIT	TEST METHOD	Nylon 6/6	Cast Nylon (TECAST T)
PHYSICAL				
Specific Gravity	g/cm3	ASTM D792	1.14	1.15
Water Absorption 23°C, 24 hr	%	ASTM D570	1.20	1.20
HARDNESS				
Rockwell Hardness (M-Scale, 23°C)	%	ASTM D785	90	115
IMPACT				
Notched impact strength (Charpy)	kJ/m2		5	4
MECHANICAL				
Tensile Modulus	MPa	ASTM D638	2,410	2,758
Tensile Strength (Yield, 23°C)	MPa	ASTM D638	83	83
Tensile Elongation (Yield, 23°C)	%	ASTM D638	7%	4%
Tensile Elongation (Break, 23°C)	%	ASTM D638	25	25
Flexural Modulus (23°C)	MPa	ASTM D790	3,030	2,758
Flexural Strength (23°C)	MPa	ASTM D790	107	86

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THERMAL				
Melting Temperature	°C	ASTM D2133	255	220
Deflection Temperature Under Load				
0.45 MPa, Unannealed	°C	ASTM D648	235	118
1.8 MPa, Unannealed	°C	ASTM D648	90	93
Thermal Expansion (CLTE) 23-100°C	1/K	DIN EN ISO 11359-1;2	12*10 ⁻⁵	12*10 ⁻⁵
Maximum Service Temperature				
Short Term	°C	UL 746B	149	149
Long Term/Continuous	°C	UL 746B	85	93
Thermal Conductivity	W/(k*m)		0.36	0.36
ELECTRICAL				
Volume Resistivity	ohm-cm	ASTM D257	1.00E+15	1.00E+15
Dielectric Strength	kV/mm	ASTM D149	42,354	19.70
Dielectric Constant (23°C, 60 Hz)	%	ASTM D150	4	3.7