

■ Nylon6/Nylon66 N6/N66

Property	ASTM Test Method	Nylon6	Nylon66
Specific Gravity	D792	1.12~1.14	1.13~1.15
Tensile Strength [MPa]	D638	62	87
Tensile Elongation [%]	D638	290	90
Young's Modulus [10^3 MPa]	D638	2.7	2.8
Compressive Strength at 5% strain [MPa]	D695	89	103
Flexural Strength [MPa]	D790	102	95
Izod Notched Impact Strength (1/2in×1/2in notched, 23°C) [J/m]	D256	46~53	27~30
Rockwell Hardness	D785	R110	R118
Thermal Conductivity [W/(m·K)]	C177	0.19	0.19
Specific Heat [J/(kg·K)]	—	1,920	1,250~2,090
Coefficient of Linear Expansion [$10^{-5}/^{\circ}\text{C}$]	D696	8.0	10.0
Continuous Use Temperature [°C]	—	80	120
Deflection Temperature [°C]	D648	0.451MPa	127~170
		1.813MPa	55~58
Volume Resistivity (23°C 50% RH) [$\Omega\cdot\text{m}$]	D257	10 ¹²	10 ¹²
		—	—
Dielectric Strength [kV/mm]	D149	shorttime 3.2mm thickness step	31.0
		3.2mm thickness	—
Dielectric Constant	D150	60Hz	4.1
		10 ³ Hz	3.7
		10 ⁶ Hz	3.4
Dissipation Factor	D150	60Hz	0.010
		10 ³ Hz	0.040
		10 ⁶ Hz	0.040
Arc resistance [sec]	D495	—	130
Water Absorption (24 hours 3.2mm Thickness) [%]	D570	2.90	1.50
Flammability or Rate of Burning	D635/UL94	self-extinguishing	self-extinguishing
sunlight resistances (color change)	—	slightly discolor	slightly discolor
Weak acid resistances	D543	resist	resist
Strong acid resistances	D543	non resistance	non resistance
Weak alkali resistances	D543	resist	resist
Strong alkali resistances	D543	resist	resist
Organic solvent resistances	D543	resist(except Phenol and Formic acid)	resist(except Phenol and Formic acid)
Transparency	—	opaque	opaque
Sand slurry Wear (SS400 =100)	(Original)	90	78
Thrust Wear (by S45C P=1,960kPa V=0.25m/sec) [$\times 10^{-6}\text{cm}^3/(\text{P}\cdot\text{V}\cdot\text{h})$]	(Original)	2.4	2.1
Allowable PV [kPa·m/sec]	(Original)	490	820

The material properties in above table are only for reference, measured by each test methods, and do not guarantee minimum value. And these properties might be changed without notice, so it is recommended to refer the data in the newest catalogues.