TORAY NYLON Resin "AMILAN"

	Property		Unit	Test method	NYLON 6			NYLON 66						
					GF15% CM1011G15	GF30% CM1011G30	V0 CM1014V0	GF15% CM3001G15	GF30% CM3001G30	GF33% CM3001G33	GF45% CM3001G45	V0 CM3004-V0	V0 GF15% CM3004G15	V0 GF30% CM3004G30
Physical	Density		g/cm^3	ISO1183	1.25	1.36	1.18	1.26	1.37	1.40	1.50	1.19	1.47	1.59
	Water absorption		%	ISO62	1.3	1.1	1.7	1.0	0.6	0.6	0.4	1.1	0.4	0.6
Mechanical	Tensile strength		MPa	ISO527-1,2	130	185	80	110	190	200	220	85	125	165
	Tensile strain at break		%	ISO527-1,2	2.5	3.0	7.5	2.0	2.5	2.5	3.0	7.5	3.0	3.0
	Flexural strength		MPa	ISO178	200	280	115	180	290	290	345	125	190	250
	Flexural modulus		GPa	ISO178	5.8	9.5	3.5	5.8	9.5	10.0	13.8	3.5	5.7	9.3
	Charpy impact		kJ/m^2	ISO179-1	9.0	15.0	4.5	6.0	13.0	14.0	15.0	4.5	6.0	9.5
	Rockwell hardness		R,M scale	ISO2039-2	R119,M90	R120,M93	R120	R120,M95	R121,M97	R121	R121,M103	R120	R120	R121
Thermal	Temperature of deflection under load	0.45Mpa	C`	ISO75-1,2	210	224	207	–	262	262	263	244	–	–
		1.8Mpa	C`		175	215	–	245	255	255	255	–	244	251
	Linear thermal expansion		×10^{-5}/K	ISO11359-2	4.5	2-3	–	4.0	2-3	2-3	2-3	–	5.0	2.0
	Flammability		class/mm	UL94	HB equivalent	HB/1.5mm	/-0/0.71mn	HB/0.75mm	HB/0.75mm	HB equivalent	HB equivalent	V-0/0.38mm	V-0/0.38mm	V-0/0.38mm
Electrical	Electrical strength		kV/mm	IEC60243-1	20	20	30	20	20	20	19	28	31	38
	Arc resistance		s	ASTM D495	120	131	120	–	114	–	–	127	70	70
	Relative permitivity			IEC60250	3.7	4.0	5.2	3.6	3.9	3.9	4.1	5.2	4.0	4.0
	Comparative tracking index		UL index	UL746A	–	–	0	0	0	–	–	0	3	3
	Volume resistivity		Ωm	IEC60093	10^13	10^13	10^13	10^13	10^13	10^13	10^13	10^13	10^13	10^13
	Dielectric constant (23℃, 60%RH)	1MHz	–	IEC60250	3.7	4.0	5.2	3.1	3.9	–	4.1	5.2	4.0	4.0
	Dissipation factor (23℃, 60%RH)	1MHz	–	IEC60250	0.03	0.03	0.08	0.04	0.02	–	0.02	0.07	0.01	0.01
Moldability	Mold shrinkage	MD	%		0.5-0.7	0.2-0.4	1.0-1.3	0.7-1.0	0.2-0.5	0.2-0.5	0.2-0.4	1.0-1.6	0.4-0.6	0.2-0.5
		TD	%		0.7-1.1	0.5-0.8	1.0-1.3	1.0-1.4	0.6-0.9	0.6-0.9	0.5-0.8	1.0-1.6	0.8-1.2	0.6-0.9