



Nylon Resin
Amilan™

MENU

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Basic physical properties

CM1017

Injection molding / Unreinforced / Nylon6 / (standard)

Property				Test Method ISO	Units	CM1017	
						Dry	3.5% water
Physical property	Specific Gravity			1138	kg/m ³	1130	-
	Water Absorption	24hrs, in 23 °C water		62	%	1.8	-
		23 °C in water				10.5	-
Mechanical property	Tensile Yield Strength		-40 °C	527-1,-2	MPa	120	115
			23 °C			85	40
			80 °C			30	20
	Elongation at Yield		23 °C	527-1,-2	%	1.5	-
	Elongation at Break		23 °C	527-1,-2	%	38.0	50<
	Flexural Strength		-40 °C	178	MPa	145	140
			23 °C			120	45
			80 °C			50	30
	Flexural Modulus		-40 °C	178	GPa	3.9	3.6
			23 °C			3.0	1.0
			80 °C			0.8	0.4
	Compressive Strength		23 °C	604	MPa	85	-
	Shear Strength		23 °C	ASTM D732	MPa	75	70
	Sharpy Impact	V-notched	-40 °C	179	kJ/m ²	2.5	11.5
			23 °C			4.0	31.0
		Unnotched	-40 °C	179	kJ/m ²	No break	-
			23 °C			No break	-
	Rockwell Hardness		23 °C	2039-2	R-scale	119	90
			-80 °C			83	-
	Taber Abrasion			-	mg/1000 cycles	3~4	-
	Coefficient of friction		Vs metal without lubrication	Suzuki Method	-	0.15~0.2	-
Heat property	Melting Point			DSC Method	°C	225	-
	Specific Heat			-	J/g· °C	1.9	-
	Thermal Conductivity			-	W/m· °C	0.25	-
	Coef. of Linear Thermal Expansion			11359	×10 ⁻⁵ / °C	8	-
	Heat Deflection Temp	0.46MPa		75-2	°C	190	-
	UL-94 Flame Class			UL-94	-	V-2(1/32")	
					-	Self Extinguishness	
	Volume Resistivity			IEC 93	Ω•m	10 ¹²⁻¹³	10 ⁹⁻¹⁰

ABS Resin
TOYOLAC
Nylon Resin
Amilan™
PBT Resin
TORAYCON
PPS Resin
TORELINA
LCP Resin
SIVERAS
Super EP
TI Polymer
Polyolefin Foam
TORAYPEF



Electrical property	Dielectric Strength(3mmt)		IEC 243-1	MV/m	20	-
	Dielectric Constant (23 °C,60%RH)	50Hz	IEC 250	-	4.1	9.0
		1KHz			3.9	8.0
		1MHz			3.4	4.5
	Dissipation Factor (23 °C,60%RH)	50Hz	IEC 250	-	0.07	0.10
		1KHz			0.06	0.11
		1MHz			0.03	0.13
	Arc Resistance Tungsten Electrode		UL- 746A	sec.	120	-
	IEC tracking Index(CTI)		UL- 746B	-	600<	-
Molding property	Mold Shirinkage 3mm Thickness	Horizontal	TORAY Method	%	0.5~1.0	-
		Vertical			1.0~1.6	-

Notes:These values are typical data for this product under specific test conditions and notintended for use as limiting specifications.

