TORAY
Innovation by Chemistry

Nylon Resin
Amilan

Property	Test Condition	Test Method ISO	Units	Nylon66/Flame Retardant GF15%, Halogen CM3004G-15 >PA66-GF15FR<	
				Dry	1.3%water
Physical property					
Water Absorption	24hrs. in 23℃ water	ISO62	%	0.4	-
Water Absorption	23℃ in water	ISO62	%	5	-
Density	23℃	ISO1183	kg/m^3	1470	-
Mechanical property					
Tensile strength	-40℃	ISO527-1,2	MPa	145	-
Tensile strength	23℃	ISO527-1,2	MPa	125	95
Tensile strength	80℃	ISO527-1,2	MPa	60	-
Elongation at Break	-40℃	ISO527-1,2	%	2.5	-
Elongation at Break	23℃	ISO527-1,2	%	3	3
Elongation at Break	80℃	ISO527-1,2	%	4.5	-
Flexural Strength	-40℃	ISO178	MPa	200	-
Flexural Strength	23℃	ISO178	MPa	190	140
Flexural Strength	80℃	ISO178	MPa	120	-
Flexural Modulus	-40℃	ISO178	GPa	6.2	-
Flexural Modulus	23℃	ISO178	GPa	5.7	3.5
Flexural Modulus	80℃	ISO178	GPa	2.8	-
Rockwell Hardness	23℃	ISO2039-2	R Scale	120	-
Taper Abrasion		ISO9352	mg/1000times	12	-
Charpy Impact Strength（V-notched）	-40℃	ISO179	kJ/m^2	4.5	-
Charpy Impact Strength（V-notched）	23℃	ISO179	kJ/m^2	6	9.5
Charpy Impact Strength（Unnotched）	23℃	ISO179	kJ/m^2	40	48
Heat property					
Melting Point		DSC Method	℃	265	-
Coef of Linear Thermal Expansion		ISO11359-2	$\times 10^{-5}$/℃	5	-
Heat Deflection Temp Low Load	0.45MPa	ISO75-1,2	℃	244	-
Flammability		UL94	rank/thickness mmt	V-0(1/64")	V-0(1/64")
Electrical property					
Volume Resistivity		IEC60093	Ω・m	10^{13}	10^{11}
Dielectric Strength		IEC60243-1	MV/m	31	26
Dielectric Constant	23℃、60%RH、1KHz	IEC 60250	-	4	-
Dielectric Constant	23℃、60%RH、1MHz	IEC 60250	-	0.01	-
IEC Tracking Index(CTI)		UL-746B	-	210	-
Arc resistance	Tungsten Electrode	UL-746A	sec.	70	-
Molding property					
Mold shrinkage(Machine Direction)	80×80×3mmt	Toray Method	%	0.4～0.6	
Mold shrinkage(Transverse Direction)	80×80×3mmt	Toray Method	%	0.8～1.2	

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Applications of amilan			
housing equipment	Digital home appliance	Electronic parts	Office automation equipment

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