

Property	Test Condition	Test Method ISO	Units	Nylon6/Reinforced	
				High flow, GF20%	
				CM1001G-20	
				>PA6-GF20<	
				Dry	3.0%water
Physical property					
Water Absorption	24hrs. in 23℃ water	ISO62	%	1.3	-
Water Absorption	23℃ in water	ISO62	%	7.8	
Density	23℃	ISO1183	kg/m ³	1290	-
Mechanical property					
Tensile strength	-40℃	ISO527-1,2	MPa	-	-
Tensile strength	23℃	ISO527-1,2	MPa	120	-
Tensile strength	80℃	ISO527-1,2	MPa	-	-
Elongation at Break	-40℃	ISO527-1,2	%	2.5	3
Elongation at Break	23℃	ISO527-1,2	%	3	4.5
Elongation at Break	80℃	ISO527-1,2	%	5	5.5
Flexural Strength	-40℃	ISO178	MPa	275	-
Flexural Strength	23℃	ISO178	MPa	205	-
Flexural Strength	80℃	ISO178	MPa	115	-
Flexural Modulus	-40℃	ISO178	GPa	8.7	7.3
Flexural Modulus	23℃	ISO178	GPa	6.8	3.5
Flexural Modulus	80℃	ISO178	GPa	3.2	2.6
Compressive Strength	-40℃	ISO604	MPa	240	-
Compressive Strength	23℃	ISO604	MPa	155	80
Compressive Strength	80℃	ISO604	MPa	90	-
Coefficient of friction (Without lubrication)	Vs metal	Suzuki Method	-	0.15	-
Shear Strength	23℃	ASTM D732	MPa	115	65
Rockwell Hardness	23℃	ISO2039-2	R Scale	R120,M92	-
Rockwell Hardness	80℃	ISO2039-2	R Scale	12	-
Taper Abrasion		ISO9352	mg/1000times	0.3	
Charpy Impact Strength (V-notched)	-40℃	ISO179	kJ/m ²	6	7
Charpy Impact Strength (V-notched)	23℃	ISO179	kJ/m ²	7	8.5
Charpy Impact Strength (Unnotched)	-40℃	ISO179	kJ/m ²	25	30
Charpy Impact Strength (Unnotched)	23℃	ISO179	kJ/m ²	55	70
Heat property					
Melting Point		DSC Method	℃	225	-
Specific Heat		-	J/g · ℃	1.6	-
Thermal Conductivity		-	W/m · ℃	0.33	-
Coef of Linear Thermal Expansion		ISO11359-2	×10 ⁻⁵ /℃	3	-
Heat Deflection Temp Low Load	0.45MPa	ISO75-1,2	℃	215	-
Flammability		UL94	rank/thickness mmt	HB(1/16")	HB(1/16")
Electrical property					
Volume Resistivity		IEC60093	Ω · m	10 ¹³	10 ¹⁰

Dielectric Strength		IEC60243-1	MV/m	20	-
Dielectric Constant	23℃、60%RH、50Hz	IEC 60250	-	4.6	-
Dielectric Constant	23℃、60%RH、1KHz	IEC 60250	-	4.4	-
Dielectric Constant	23℃、60%RH、1MHz	IEC 60250	-	3.8	-
Dissipation Factor	23℃、60%RH、50Hz	IEC 60250	-	0.04	-
Dissipation Factor	23℃、60%RH、1KHz	IEC 60250	-	0.04	-
Dissipation Factor	23℃、60%RH、1MHz	IEC 60250	-	0.03	-
Arc resistance	Tungsten Electrode	UL-746A	sec.	120	-
Molding property					
Mold shrinkage(Machine Direction)	80×80×3mmt	Toray Method	%	0.3~0.5	-
Mold shrinkage(Transverse Direction)	80×80×3mmt	Toray Method	%	0.6~0.9	-
PDF DOWNLOAD					

Applications of amilan

Generic Component/Livingware