

Property	Test Condition	Test Method ISO	Units	Nylon66/Reinforced		Nylon66/Reinforced		Nylon66/Reinforced		Nylon66/Reinforced		Nylon66/Reinforced		Nylon66/Reinforced		Nylon66/Reinforced		Nylon66/Reinforced	
				Standard, GF15%		Heat stability, GF15%		Standard, GF30%		Heat stability, GF30%		Standard, GF45%		Heat stability, GF45%		Low warpage, Mineral filler reinforced		GF35%/Calcium chloride resistance	
				CM3001G-15		CM3006G-15		CM3001G30		CM3006G-30		CM3001G-45		CM3006G-45		CM3001R		CM3211G35UB1	
				>PA66-GF15<		>PA66-GF15<		>PA66-GF30<		>PA66-GF30<		>PA66-GF30<		>PA66-GF45<		>PA66-MD40<		>PA66/PA610-GF35<	
				Dry	1.9%water	Dry	1.9%water	Dry	1.5%water	Dry	1.5%water	Dry	1.0%water	Dry	1.0%water	Dry	Dry		
Physical property																			
Content of filler		-	wt%															35	
Water Absorption	24hrs. in 23℃ water	ISO62	%	1	-	1	-	0.6	-	0.6	-	0.4	-	0.4	-	0.6	-	0.4	
Water Absorption	23℃ in water	ISO62	%	7.2	-	7.2	-	5.5	-	5.5	-	4.8	-	4.8	-	5.1	-	3	
Water Absorption	24hrs. in 23℃ water	ASTM D570	%															0.4	
Water Absorption	23℃x50%RH in water		%															1.1	
Density	23℃	ISO1183	kg/m ³	1260	-	1260	-	1370	-	1370	-	1500	-	1500	-	1510	-	1360	
Mechanical property																			
Tensile strength	-40℃	ISO527-1,2	MPa	155	145	155	145	235	215	235	215	280	250	280	250	120	-	280	
Tensile strength	23℃	ISO527-1,2	MPa	110	90	110	90	190	140	190	140	220	165	220	165	95	70	195	
Tensile strength	80℃	ISO527-1,2	MPa	65	50	65	50	120	100	120	100	140	115	140	115	40	-	120	
Elongation at Break	-40℃	ISO527-1,2	%	2	-	2	-	2	2.5	2	2.5	2.5	-	2.5	-	3	-	3	
Elongation at Break	23℃	ISO527-1,2	%	2	4.5	2	4.5	2.5	3	2.5	3	3	-	3	-	3.5	5	3	
Elongation at Break	80℃	ISO527-1,2	%	7.5	-	7.5	-	5	5.5	5	5.5	5.5	-	5.5	-	5	-	5	
Flexural Strength	-40℃	ISO178	MPa	225	190	225	190	325	315	325	315	380	350	380	350	185	-	370	
Flexural Strength	23℃	ISO178	MPa	180	135	180	135	290	215	290	215	345	295	345	295	155	100	290	
Flexural Strength	80℃	ISO178	MPa	115	85	115	85	190	135	190	135	230	195	230	195	65	-	160	
Flexural Modulus	-40℃	ISO178	GPa	6.6	6.3	6.6	6.3	11.6	10.5	11.6	10.5	15.5	14.4	15.5	14.4	6.2	-	11	
Flexural Modulus	23℃	ISO178	GPa	5.8	3.7	5.8	3.7	9.5	6.8	9.5	6.8	13.8	11	13.8	11	5.8	3	9.5	
Flexural Modulus	80℃	ISO178	GPa	2.8	2.2	2.8	2.2	5.8	4.3	5.8	4.3	8.6	7.3	8.6	7.3	2	-	4.8	
Compressive Strength	-40℃	ISO604	MPa	-	-	-	-	250	200	250	200	265	-	265	-	-	-		
Compressive Strength	23℃	ISO604	MPa	-	-	-	-	180	110	180	110	195	-	195	-	-	-		
Compressive Strength	80℃	ISO604	MPa	-	-	-	-	110	70	110	70	120	-	120	-	-	-		
Coefficient of friction (Without lubrication)	Vs metal	Suzuki Method	-	-	-	-	-	0.15	-	0.15	-	-	-	-	-	-	-		
Coefficient of friction (With lubrication)	Vs metal	Suzuki Method	-													-	-		
Shear Strength	23℃	ASTM D732	MPa	80	-	80	-	95	85	95	85	105	-	105	-	-	-		
Rockwell Hardness	23℃	ISO2039-2	R Scale	R120,M95	-	R120,M95	-	R121,M97	-	R121,M97	-	R121,M103	-	R121,M103	-	R120,M83	-	R120,M93	
Rockwell Hardness	80℃	ISO2039-2	R Scale	-	-	-	-	24	-	24	-	-	-	-	-				
Taper Abrasion		ISO9352	mg/1000times	-	-	-	-	0.4	-	0.4	-	-	-	-	-	-	-		
Charpy Impact Strength (V-notched)	-40℃	ISO179	kJ/m ²	-	-	-	-	10	12	10	12	11.5	12	11.5	12	-	-	10	
Charpy Impact Strength (V-notched)	23℃	ISO179	kJ/m ²	6	-	6	-	13	16	13	16	15	16.5	15	16.5	5.5	-	13.5	
Charpy Impact Strength (Unnotched)	-40℃	ISO179	kJ/m ²	-	-	-	-	60	70	60	70	85	90	85	90	-	-	89	
Charpy Impact Strength (Unnotched)	23℃	ISO179	kJ/m ²	30	-	30	-	65	75	65	75	90	100	90	100	-	-	94.5	
Heat property																			
Melting Point		DSC Method	℃	265	-	265	-	265	-	265	-	265	-	265	-	265	-	265	
Specific Heat		-	J/g · ℃	2	-	2	-	1.8	-	1.8	-	1.5	-	1.5	-	-	-		
Thermal Conductivity		-	W/m · ℃	0.36	-	0.36	-	0.4	-	0.4	-	0.42	-	0.42	-	-	-	0.42	
Coef of Linear Thermal Expansion		ISO11359-2	×10 ⁻⁵ /℃	4	-	4	-	2~3	-	2~3	-	2~3	-	2~3	-	-	-	2~3	
Heat Deflection Temp Low Load	0.45MPa	ISO75-1,2	℃	-	-	-	-	262	-	262	-	263	-	263	-	243	-	228	
Heat Deflection Temp High Load	1.80MPa	ISO75-1,2	℃													185	-	225	
Flammability		UL94	rank/thickness mm	HB(1/32")	HB(1/32")	HB(1/32")	HB(1/32")	HB(1/32")	HB(1/32")	HB(1/32")	HB(1/32")	HB(1/32")	HB(1/32")	HB(1/32")	-	-	HB	HB (1/16") 相当	
Electrical property																			
Volume Resistivity		IEC60093	Ω · m	10 ¹³	10 ¹⁰ ~10 ¹¹	10 ¹³	10 ¹⁰ ~10 ¹¹	10 ¹³	10 ¹⁰ ~10 ¹¹	10 ¹³	10 ¹⁰ ~10 ¹¹	10 ¹³	10 ¹⁰ ~10 ¹¹	10 ¹³	10 ¹⁰ ~10 ¹¹	-	-	1.013x10 ³	
Dielectric Strength		IEC60243-1	MV/m	20	-	20	-	20	17	20	17	19	-	19	-	-	-		
Dielectric Constant	23℃、60%RH、50Hz	IEC 60250	-	4.3	-	4.3	-	4.6	6.3	4.6	6.3	4.7	-	4.7	-	-	-		
Dielectric Constant	23℃、60%RH、1KHz	IEC 60250	-	4.1	-	4.1	-	4.4	5.5	4.4	5.5	4.5	-	4.5	-	-	-		
Dielectric Constant	23℃、60%RH、1MHz	IEC 60250	-	3.6	-	3.6	-	3.9	4	3.9	4	4.1	-	4.1	-	-	-		
Dissipation Factor	23℃、60%RH、50Hz	IEC 60250	-	0.04	-	0.04	-	0.02	0.08	0.02	0.08	0.02	-	0.02	-	-	-		
Dissipation Factor	23℃、60%RH、1KHz	IEC 60250	-	0.04	-	0.04	-	0.02	0.08	0.02	0.08	0.02	-	0.02	-	-	-		
Dissipation Factor	23℃、60%RH、1MHz	IEC 60250	-	0.04	-	0.04	-	0.02	0.04	0.02	0.04	0.02	-	0.02	-	-	-		
Arc resistance	Tungsten Electrode	UL-746A	sec.	-	-	-	-	114	120	114	120	-	-	-	-				
Molding property																			
Mold shrinkage(Machine Direction)	80×80×3mm	Toray Method	%	0.7~1.0	-	0.7~1.0	-	0.2~0.5	-	0.2~0.5	-	0.2~0.4	-	0.2~0.4	-	0.7~1.0	-	0.2~0.4	
Mold shrinkage(Transverse Direction)	80×80×3mm	Toray Method	%	1.0~1.4	-	1.0~1.4	-	0.6~0.9	-	0.6~0.9	-	0.5~0.8	-	0.5~0.8	-	1.0~1.4	-	0.5~0.8	

Property	Test Condition	Test Method ISO	Units	Nylon66/Reinforced	
				GF35%/Calcium chloride resistance/Heat stability	
				CM3216G35UB1	
				>PA66/PA610-GF35<	
Dry					
Physical property					
Content of filler		-	wt%	35	
Water Absorption	24hrs. in 23℃ water	ISO62	%	0.4	
Water Absorption	23℃ in water	ISO62	%	3	
Water Absorption	24hrs. in 23℃ water	ASTM D570	%	0.4	
Water Absorption	23℃×50%RH in water		%	1.1	
Density	23℃	ISO1183	kg/m ³	1360	
Mechanical property					
Tensile strength	-40℃	ISO527-1,2	MPa	280	
Tensile strength	23℃	ISO527-1,2	MPa	195	
Tensile strength	80℃	ISO527-1,2	MPa	120	
Elongation at Break	-40℃	ISO527-1,2	%	3	
Elongation at Break	23℃	ISO527-1,2	%	3	
Elongation at Break	80℃	ISO527-1,2	%	5	
Flexural Strength	-40℃	ISO178	MPa	370	
Flexural Strength	23℃	ISO178	MPa	290	
Flexural Strength	80℃	ISO178	MPa	160	
Flexural Modulus	-40℃	ISO178	GPa	11	
Flexural Modulus	23℃	ISO178	GPa	9.5	
Flexural Modulus	80℃	ISO178	GPa	4.8	
Rockwell Hardness	23℃	ISO2039-2	R Scale	R120,M93	
Charpy Impact Strength (V-notched)	-40℃	ISO179	kJ/m ²	10	
Charpy Impact Strength (V-notched)	23℃	ISO179	kJ/m ²	13.5	
Charpy Impact Strength (Unnotched)	-40℃	ISO179	kJ/m ²	89	
Charpy Impact Strength (Unnotched)	23℃	ISO179	kJ/m ²	94.5	
Heat property					
Melting Point		DSC Method	℃	265	
Thermal Conductivity		-	W/m · ℃	0.42	
Coef of Linear Thermal Expansion		ISO11359-2	×10 ⁻⁵ /℃	2~3	
Heat Deflection Temp Low Load	0.45MPa	ISO75-1,2	℃	228	
Heat Deflection Temp High Load	1.80MPa	ISO75-1,2	℃	225	
Flammability		UL94	rank/thickness mm	HB (1/16") 相当	
Electrical property					
Volume Resistivity		IEC60093	Ω · m	1.013×10 ³	
Molding property					
Mold shrinkage(Machine Direction)	80×80×3mm	Toray Method	%	0.2~0.4	
Mold shrinkage(Transverse Direction)	80×80×3mm	Toray Method	%	0.5~0.8	

These values are typical data for this product under specific test conditions and not intended for use as limiting specifications.