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## Basic physical properties

### CM1011G-30 Injection Grade / Reinforced Nylon6

Property	Test Method	ISO	Units	CM1011G-30			
				dry	2.5% water		
Physical property	Glass Fiber Contents		-	wt%			
	Specific Gravity		1138	kg/m <sup>3</sup>			
	Water Absorption	24hrs, in 23 °C water	62	%	1.1	-	
23 °C in water		6.4			-		
Mechanical property	Tensile Yield Strength	-40 °C	527-1,-2	MPa	250	225	
		23 °C			185	105	
		80 °C			100	70	
	Elongation at Break	-40 °C	527-1,-2	%	3.0	3.0	
		23 °C			3.0	4.0	
		80 °C			4.0	4.5	
	Flexural Strength	-40 °C	178	MPa	325	315	
		23 °C			280	145	
		80 °C			155	105	
	Flexural Modulus	-40 °C	178	GPa	11.8	9.8	
		23 °C			9.5	5.1	
		80 °C			4.7	3.5	
	Compressive Strength	-40 °C	604	MPa	250	210	
		23 °C			180	120	
		80 °C			95	70	
	Shear Strength		23 °C	ASTM D732	MPa	85	-
	Sharp Impact	V-notched	-40 °C	179	kJ/m <sup>2</sup>	10.0	16.5
			23 °C			15.0	22.5
Unnotched		-40 °C	179	kJ/m <sup>2</sup>	70	80	
		23 °C			80	100	
Rockwell Hardness		23 °C	2039-2	R, M-scale	R120, M93	-	
Taper Abrasion				mg/1000time	12	-	
Coefficient of friction	Vs metal without lubrication		Suzuki Method	-	0.35	-	
					<0.15	-	
Heat property	Melting Point		DSC Method	°C	225	-	
	Specific Heat		-	J/g °C	1.6	-	
	Thermal Conductivity		-	W/m °C	0.38	-	
	Coef of Linear Thermal Expansion		11359	×10 <sup>-5</sup> /°C	2~3	-	
	Heat Deflection Temp.	0.46MPa	75-2	°C	224	-	
		1.86MPa			215	-	
Flame Class		UL-94	-	HB(1/16")			
Electrical	Volume Resistivity		IEC 93	Ω·m	10 <sup>13</sup>	10 <sup>10</sup>	

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

property	Dielectric Strength		IEC 243-1	MV/m	20	18
	Dielectric Constant 23 °C,60%RH	50Hz	IEC 250	-	4.9	10.7
		1KHz			4.6	7.9
		1MHz			4.0	4.3
	Dissipation Factor 23 °C,60%RH	50Hz	IEC 250	-	0.03	0.17
		1KHz			0.03	0.18
		1MHz			0.03	0.07
Arc Resistance Tungsten Electrode		UL-746A	sec.	131	137	
Molding property	Mold Shrinkage 3mm Thickness	Horizontal	Toray Method	%	0.2~0.4	-
		Vertical			0.5~0.8	-

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

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