

Amilan™ CM3006G-30 Nylon 66

TECHNICAL DATA

Product Description

Heat stabilized, GF30%

Uses

- Automotive Applications
- Automotive Electronics
- Automotive Under the Hood
- Electrical/Electronic Applications
- Filters
- Gears
- Tanks

Processing Method

- Injection Molding

ISO Designation

- >PA66-GF30<

Type

- Nylon66/Reinforced

ASTM & ISO Properties

Physical	Dry	Water Absorption	Unit	Test Method
Density (23°C)	1.37	--	g/cm³	ISO 1183
Spiral Flow ¹	440	--	mm	Internal Method
Molding Shrinkage ²				Internal Method
Across Flow : 3.00 mm	0.60 to 0.90	--	%	
Flow : 3.00 mm	0.20 to 0.50	--	%	
Water Absorption ³				ISO 62
24 hr, 23°C	0.60	--	%	
Saturation, 23°C	5.5	--	%	
Mechanical	Dry	Water Absorption	Unit	Test Method
Tensile Strength				ISO 527-2
-40°C	235	215	MPa	
23°C	190	140	MPa	
80°C	120	100	MPa	
Tensile Strain				ISO 527-2
Break, -40°C	2.0	2.5	%	
Break, 23°C	2.5	3.0	%	
Break, 80°C	5.0	5.5	%	
Flexural Modulus				ISO 178
-40°C	11600	10500	MPa	
23°C	9500	6800	MPa	
80°C	5800	4300	MPa	
Flexural Stress				ISO 178
-40°C	325	315	MPa	
23°C	290	215	MPa	
80°C	190	135	MPa	
Compressive Stress				ISO 604
-40°C	250	200	MPa	
23°C	180	110	MPa	
80°C	110	70	MPa	
Shear Strength (23°C)	95	85	MPa	ASTM D732
Taber Abrasion Resistance				ISO 9352
1000 Cycles	24	--	mg	
Coefficient of Friction - vs. Metal ⁴	0.40	--		



Impact	Dry	Water Absorption	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-40°C	10.0	12.0	kJ/m ²	
23°C	13.0	16.0	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179
-40°C	60.0	70.0	kJ/m ²	
23°C	65.0	75.0	kJ/m ²	
Hardness	Dry	Water Absorption	Unit	Test Method
Rockwell Hardness				ISO 2039-2
M-Scale, 23°C	97	--		
R-Scale, 23°C	121	--		
Thermal	Dry	Water Absorption	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	262	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	255	--	°C	ISO 75-2/A
Melting Temperature	265	--	°C	DSC
Specific Heat	1800	--	J/kg/°C	
Thermal Conductivity	0.40	--	W/m/K	
Coefficient of Linear Thermal Expansion	2 to 3	--	cm ³ /cm/°C	ISO 11359-2
Electrical	Dry	Water Absorption	Unit	Test Method
Volume Resistivity	1.0E+13	1.0E+10 to 1.0E+11	ohms·m	IEC 60093
Electric Strength	20	17	kV/mm	IEC 60243-1
Dielectric Constant				IEC 60250
23°C, 50 Hz	4.6	6.3		
23°C, 1 kHz	4.4	5.5		
23°C, 1 MHz	3.9	4.0		
Dissipation Factor				IEC 60250
23°C, 50 Hz	0.020	0.080		
23°C, 1 kHz	0.020	0.080		
23°C, 1 MHz	0.020	0.040		
Arc Resistance	114	120	sec	UL 746
Flammability	Dry	Water Absorption	Unit	Test Method
Flame Rating (0.75 mm)	HB	HB		UL 94

Additional Information

Dry Water absorption Moisture Content 1.5%

Notes

¹ Melt Temperature: 290°C, Injection Pressure: 900 bar, 2.00 mm

² 80x80x3mm

³ in water

⁴ Without Lubrication

Toray Industries, Inc.

