

Amilan® CM3001-N

Polyamide 66
Toray Resin Company

Message:

Amilan® CM3001-N is a Polyamide 66 (Nylon 66) product. It is available in Asia Pacific, Europe, or North America. Primary characteristic: flame rated.

General Information				
UL YellowCard		E41797-233433		
Part Marking Code		>PA66<		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.14	--	g/cm ³	ISO 1183
Molding Shrinkage - Flow				Internal Method
1.00 mm ¹	0.80 to 1.5	--	%	
3.00 mm ²	1.5 to 2.2	--	%	
Water Absorption				ISO 62
23°C, 24 hr	1.2	--	%	
Saturation, 23°C	8.0	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness				ISO 2039-2
R-Scale, 80°C	97	--		
R-Scale, 23°C	119	100		
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Stress				ISO 527-2
-40°C	115	110	MPa	
23°C	80.0	50.0	MPa	
80°C	40.0	40.0	MPa	
Tensile Strain				ISO 527-2
Yield, 23°C	1.5	--	%	
Break, 23°C	25	50	%	
Flexural Modulus				ISO 178
-40°C	4300	4100	MPa	
23°C	2800	1400	MPa	
80°C	900	500	MPa	
Flexural Stress				ISO 178
-40°C	140	125	MPa	
23°C	115	65.0	MPa	
80°C	65.0	40.0	MPa	
Compressive Stress (23°C)	90.0	--	MPa	ISO 604
Shear Strength (23°C)	80.0	75.0	MPa	ASTM D732

Taber Abrasion Resistance (1000 Cycles)	8.00	--	mg	ISO 9352
Coefficient of Friction - vs. Metal ³	0.150 to 0.200	--		Suzuki Method
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-40°C	2.5	--	kJ/m ²	
23°C	4.0	24	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179
-40°C	No Break	--		
23°C	No Break	--		
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	220	--	°C	ISO 75-2/B
Melting Temperature	265	--	°C	DSC
CLTE - Flow	9.0E-5 to 1.0E-4	--	cm/cm/°C	ISO 11359-2
Specific Heat	2100	--	J/kg/°C	
Thermal Conductivity	0.32	--	W/m/K	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+14 to 1.0E+15	1.0E+12 to 1.0E+13	ohms·cm	IEC 60093
Electric Strength	18	--	kV/mm	IEC 60243-1
Dielectric Constant ⁴				IEC 60250
23°C, 50 Hz	4.00	7.50		
23°C, 1 kHz	3.90	6.50		
23°C, 1 MHz	3.30	3.80		
Dissipation Factor ⁵				IEC 60250
23°C, 50 Hz	0.030	0.060		
23°C, 1 kHz	0.030	0.060		
23°C, 1 MHz	0.020	0.070		
Arc Resistance ⁶	130	--	sec	UL 746
Comparative Tracking Index (CTI)	600	--	V	UL 746
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (0.397 mm)	V-2	--		UL 94
NOTE				
1.	80x80x1mm			
2.	80x80x3mm			
3.	Without Lubrication			
4.	60% RH			
5.	60% RH			
6.	Tungsten Electrode			

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