

Amilan® CM3004G-30

Polyamide 6

Toray Resin Company

Technical Data

Product Description

Amilan® CM3004G-30 is a Polyamide 6 (Nylon 6) product filled with 30% glass fiber. It is available in Asia Pacific, Europe, or North America. Primary characteristic: flame retardant/flame rated.

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet (Japanese)
UL Yellow Card ²	• E41797-233437
Search for UL Yellow Card	• Toray Resin Company • Amilan®
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight
Additive	• Halogen
Features	• Halogenated

Physical	Dry	Conditioned	Unit	Test Method
Density	1.59	--	g/cm ³	ISO 1183
Molding Shrinkage				Internal Method
Across Flow : 3.00 mm	0.60 to 0.90	--	%	
Flow : 3.00 mm	0.20 to 0.50	--	%	
Water Absorption				ISO 62
23°C, 24 hr	0.60	--	%	
Saturation, 23°C	4.0	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Stress				ISO 527-2
Yield, -40°C	190	--	MPa	
Yield, 23°C	165	135	MPa	
Yield, 80°C	110	--	MPa	
Tensile Strain				ISO 527-2
Break, -40°C	2.5	--	%	
Break, 23°C	3.0	3.0	%	
Break, 80°C	4.5	--	%	
Flexural Modulus				ISO 178
-40°C	10200	--	MPa	
23°C	9300	6500	MPa	
80°C	5500	--	MPa	
Flexural Strength				ISO 178
-40°C	275	--	MPa	
23°C	250	200	MPa	
80°C	150	--	MPa	
Taber Abrasion Resistance (1000 Cycles)	26.0	--	mg	
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-40°C	7.0	--	kJ/m ²	
23°C	9.5	14	kJ/m ²	
Charpy Unnotched Impact Strength (23°C)	65	70	kJ/m ²	ISO 179
Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	121	--		ISO 2039-2
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
0.45 MPa, Unannealed	251	--	°C	



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Thermal	Dry	Conditioned	Unit	Test Method
Melting Temperature	265	--	°C	DSC
CLTE - Flow	0.000020	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+15	1.0E+13	ohm·cm	IEC 60093
Electric Strength (3.00 mm)	38	33	kV/mm	IEC 60243-1
Dielectric Constant ⁴ (23°C, 1 MHz)	4.00	--		IEC 60250
Dissipation Factor ⁴ (23°C, 1 MHz)	0.010	--		IEC 60250
Arc Resistance ⁵	70.0	--	sec	UL 746
Comparative Tracking Index (CTI)	200	--	V	UL 746
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (0.397 mm)	V-0	--		UL 94

