

# Amilan® HF3074G-15

Polyamide 6

Toray Resin Company

## Technical Data

### Product Description

Amilan® HF3074G-15 is a Polyamide 6 (Nylon 6) product filled with 15% glass fiber. It is available in Asia Pacific, Europe, or North America.

Characteristics include:

- Flame Rated
- Halogen Free

### General

Material Status	• Commercial: Active
Literature <sup>1</sup>	• <a href="#">Technical Datasheet (Japanese)</a>
UL Yellow Card <sup>2</sup>	• <a href="#">E41797-233453</a>
Search for UL Yellow Card	• <a href="#">Toray Resin Company</a> • <a href="#">Amilan®</a>
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight
Features	• Halogen Free

Physical	Dry	Conditioned	Unit	Test Method
Density	1.41	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				Internal Method
Across Flow : 0.118 in (3.00 mm)	0.80 to 1.2	--	%	
Flow : 0.118 in (3.00 mm)	0.40 to 0.60	--	%	
Water Absorption				ISO 62
73°F (23°C), 24 hr	0.40	--	%	
Saturation, 73°F (23°C)	5.0	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Stress				ISO 527-2
Yield, -40°F (-40°C)	25400 (175)	--	psi (MPa)	
Yield, 73°F (23°C)	18900 (130)	15200 (105)	psi (MPa)	
Yield, 176°F (80°C)	13800 (95.0)	--	psi (MPa)	
Tensile Strain				ISO 527-2
Break, -40°F (-40°C)	2.5	--	%	
Break, 73°F (23°C)	2.0	2.0	%	
Break, 176°F (80°C)	4.5	--	%	
Flexural Modulus				ISO 178
-40°F (-40°C)	1.20E+6 (8300)	--	psi (MPa)	
73°F (23°C)	1.10E+6 (7600)	711000 (4900)	psi (MPa)	
176°F (80°C)	580000 (4000)	--	psi (MPa)	



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Mechanical	Dry	Conditioned	Unit	Test Method
Flexural Stress				ISO 178
-40°F (-40°C)	30500 (210)	--	psi (MPa)	
73°F (23°C)	26700 (184)	20300 (140)	psi (MPa)	
176°F (80°C)	18100 (125)	--	psi (MPa)	
Taber Abrasion Resistance (1000 Cycles)	12.0	--	mg	
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-40°F (-40°C)	2.1 (4.5)	--	ft·lb/in <sup>2</sup> (kJ/m <sup>2</sup> )	
73°F (23°C)	3.1 (6.5)	4.5 (9.5)	ft·lb/in <sup>2</sup> (kJ/m <sup>2</sup> )	
Charpy Unnotched Impact Strength				ISO 179
73°F (23°C)	21 (45)	26 (55)	ft·lb/in <sup>2</sup> (kJ/m <sup>2</sup> )	
Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness (R-Scale, 73°F (23°C))	120	--		ISO 2039-2
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
66 psi (0.45 MPa), Unannealed	480 (249)	--	°F (°C)	
Melting Temperature	509 (265)	--	°F (°C)	DSC
CLTE - Flow	2.8E-5 (5.0E-5)	--	in/in/°F (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 (0.118 in (3.00 mm))	860 (34)	740 (29)	V/mil (kV/mm)	IEC 60243-1
Dielectric Constant <sup>4</sup> (73°F (23°C), 1 MHz)	4.00	--		IEC 60250
Dissipation Factor <sup>4</sup> (73°F (23°C), 1 MHz)	0.010	--		IEC 60250
Arc Resistance <sup>5</sup>	70.0	--	sec	UL 746
Comparative Tracking Index (CTI)	300	--	V	UL 746
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (0.0313 in (0.794 mm))	V-0	--		UL 94

