

ForTii® F81

DSM Engineering Plastics - Polyphthalamide

Saturday, January 18, 2020

General Information

Product Description

15% Glass Reinforced, PA4T, Improved flow, Flame Retardant, Halogen free and free of red phosphorous

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight		
Additive	• Flame Retardant		
Features	• Flame Retardant • Good Flow	• Halogen Free • Low (to None) Phosphorus Content	
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PPA-GF15 FR(40)		

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.34	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	1.2	--	%	
Flow	0.50	--	%	
Water Absorption				ISO 62
Equilibrium, 23°C, 50% RH	2.2	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	7000	7000	MPa	ISO 527-2
Tensile Stress (Break)	105	110	MPa	ISO 527-2
Tensile Strain (Break)	2.0	2.1	%	ISO 527-2
Flexural Modulus	7000	7000	MPa	ISO 178
Flexural Stress	180	175	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
23°C	7.0	7.0	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
23°C	30	30	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/A
1.8 MPa, Unannealed	300	--	°C	
Melting Temperature ²	325	--	°C	ISO 11357-3
CLTE - Flow	4.0E-5	--	cm/cm/°C	ASTM D696
CLTE - Transverse	5.5E-5	--	cm/cm/°C	ASTM D696
Electrical	Dry	Conditioned	Unit	Test Method
Electric Strength	33	--	kV/mm	IEC 60243-1
Comparative Tracking Index	600	--	V	IEC 60112

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Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification				IEC 60695-11-10,
0.75 mm	V-0	--		-20

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min