

Stanyl® TW241F12

Polyamide 46
DSM Engineering Plastics

Message:

Stanyl® TW241F12 is a Polyamide 46 (Nylon 46) material filled with 60% glass fiber. It is available in Asia Pacific, Europe, or North America. Important attributes of Stanyl® TW241F12 are:
Flame Rated
Heat Stabilizer

General Information				
UL YellowCard		E43392-100648234	E47960-100648233	
Filler / Reinforcement		Glass Fiber,60% Filler by Weight		
Additive		Heat Stabilizer		
Features		Good Flow		
		Heat Stabilized		
Forms		Pellets		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.76	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.70	--	%	
Flow	0.40	--	%	
Water Absorption (Equilibrium, 23°C, 50% RH)	1.4	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				ISO 527-2
--	20000	12000	MPa	
120°C	10000	--	MPa	
160°C	9100	--	MPa	
180°C	8500	--	MPa	
200°C	8000	--	MPa	
Tensile Stress				ISO 527-2
Break	255	170	MPa	
Break, 120°C	150	--	MPa	
Break, 160°C	125	--	MPa	
Break, 180°C	110	--	MPa	
Break, 200°C	100	--	MPa	
Tensile Strain				ISO 527-2
Break	2.0	3.0	%	
Break, 120°C	3.0	--	%	
Break, 160°C	3.0	--	%	

Break, 180°C	3.0	--	%	
Break, 200°C	3.0	--	%	
Flexural Modulus	17000	10000	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	18	18	kJ/m ²	
23°C	18	18	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	65	75	kJ/m ²	
23°C	90	100	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
-40°C	18	18	kJ/m ²	
23°C	18	18	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	290	--	°C	ISO 75-2/A
Melting Temperature ¹	295	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	2.0E-5	--	cm/cm/°C	
Transverse	3.5E-5	--	cm/cm/°C	
Thermal Index - 5000 hr	177	--	°C	IEC 60216
Flammability	Dry	Conditioned		Test Method
Flammability Classification (1.50 mm)	HB	--		IEC 60695-11-10, -20
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0 to 8.0		hr	
Rear Temperature	280 to 310		°C	
Middle Temperature	300 to 315		°C	
Front Temperature	300 to 315		°C	
Nozzle Temperature	300 to 310		°C	
Processing (Melt) Temp	310 to 320		°C	
Mold Temperature	60.0 to 120		°C	
Injection Rate	Moderate-Fast			
Back Pressure	1.00		MPa	
Screw Compression Ratio	2.5:1.0			
NOTE				
1.	10°C/min			

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