

Stanyl® TW241F10

Polyamide 46
DSM Engineering Plastics

Message:

Stanyl® TW241F10 is a Polyamide 46 (Nylon 46) material filled with 50% glass fiber. It is available in Asia Pacific, Europe, or North America. Important attributes of Stanyl® TW241F10 are:
Flame Rated
Heat Stabilizer
Typical application of Stanyl® TW241F10: Automotive

General Information			
UL YellowCard	E43392-235043	E47960-240074	E172082-100045324
Filler / Reinforcement	Glass Fiber,50% Filler by Weight		
Additive	Heat Stabilizer		
Features	Heat Stabilized		
Forms	Pellets		
Multi-Point Data	Isochronous Stress vs. Strain (ISO 11403-1)		
	Isothermal Stress vs. Strain (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
	Shear Modulus vs. Temperature (ISO 11403-1)		
	Viscosity vs. Shear Rate (ISO 11403-2)		

Physical	Dry	Conditioned	Unit	Test Method
Density	1.62	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.90	--	%	
Flow	0.40	--	%	
Water Absorption (Equilibrium, 23°C, 50% RH)	1.9	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				ISO 527-2
--	16000	10000	MPa	
120°C	8200	--	MPa	
160°C	7400	--	MPa	
180°C	7000	--	MPa	
200°C	6600	--	MPa	
Tensile Stress				ISO 527-2
Break	250	160	MPa	
Break, 120°C	140	--	MPa	
Break, 160°C	120	--	MPa	
Break, 180°C	110	--	MPa	
Break, 200°C	100	--	MPa	

Tensile Strain				ISO 527-2
Break	2.7	5.0	%	
Break, 120°C	5.0	--	%	
Break, 160°C	5.0	--	%	
Break, 180°C	5.0	--	%	
Break, 200°C	5.0	--	%	
Flexural Modulus				ISO 178
--	14000	9000	MPa	
120°C	7300	--	MPa	
160°C	6500	--	MPa	
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	14	14	kJ/m ²	
23°C	16	24	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	90	100	kJ/m ²	
23°C	100	110	kJ/m ²	
Notched Izod Impact Strength				ISO 180/1A
-40°C	14	14	kJ/m ²	
23°C	16	24	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)				ISO 75-2/A
	290	--	°C	
Melting Temperature ¹	295	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	2.5E-5	--	cm/cm/°C	
Transverse	4.0E-5	--	cm/cm/°C	
Thermal Index - 5000 hr	177	--	°C	IEC 60216
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+14	1.0E+10	ohms · cm	IEC 60093
Electric Strength	30	20	kV/mm	IEC 60243-1
Comparative Tracking Index	300	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification				IEC 60695-11-10, -20
0.750 mm	HB	--		
1.50 mm	HB	--		
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0 to 8.0		hr	

Rear Temperature	280 to 320	°C
Middle Temperature	300 to 320	°C
Front Temperature	300 to 320	°C
Nozzle Temperature	300 to 320	°C
Processing (Melt) Temp	305 to 320	°C
Mold Temperature	80.0 to 120	°C
Injection Rate	Moderate-Fast	
Back Pressure	2.00 to 10.0	MPa
Screw Compression Ratio	2.5:1.0	
NOTE		

1. 10°C/min

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