

Stanyl® TW271B6

Polyamide 46
DSM Engineering Plastics

Message:

Stanyl® TW271B6 is a Polyamide 46 (Nylon 46) material filled with 30% carbon fiber. It is available in Asia Pacific, Europe, or North America. Primary attribute of Stanyl® TW271B6: Heat Stabilizer.

General Information				
Filler / Reinforcement		Carbon Fiber,30% Filler by Weight		
Additive		Heat Stabilizer		
Features		Heat Stabilized		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.32	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.70	--	%	
Flow	0.30	--	%	
Water Absorption (Equilibrium, 23°C, 50% RH)	2.4	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				ISO 527-2
--	24000	14500	MPa	
120°C	13500	--	MPa	
160°C	12000	--	MPa	
180°C	11500	--	MPa	
200°C	11000	--	MPa	
Tensile Stress				ISO 527-2
Break	260	170	MPa	
Break, 120°C	140	--	MPa	
Break, 160°C	115	--	MPa	
Break, 180°C	105	--	MPa	
Break, 200°C	95.0	--	MPa	
Tensile Strain				ISO 527-2
Break	1.7	3.5	%	
Break, 120°C	3.1	--	%	
Break, 160°C	3.1	--	%	
Break, 180°C	3.1	--	%	
Break, 200°C	3.1	--	%	
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	7.0	7.0	kJ/m ²	

23°C	7.0	17	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	50	55	kJ/m ²	
23°C	50	80	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	2.5E-5	--	cm/cm/°C	
Transverse	3.5E-5	--	cm/cm/°C	
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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