

Stanyl® TW271B3

Polyamide 46
DSM Engineering Plastics

Message:

Stanyl® TW271B3 is a Polyamide 46 (Nylon 46) material filled with 15% carbon fiber. It is available in Asia Pacific, Europe, or North America. Primary attribute of Stanyl® TW271B3: Heat Stabilizer.

General Information				
UL YellowCard		E47960-100962972	E172082-100962974	
Filler / Reinforcement		Carbon Fiber,15% Filler by Weight		
Additive		Heat Stabilizer		
Features		Heat Stabilized		
Forms		Pellets		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.32	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.80	--	%	
Flow	0.20	--	%	
Water Absorption (Equilibrium, 23°C, 50% RH)	2.6	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				ISO 527-2
--	12500	6700	MPa	
120°C	6300	--	MPa	
160°C	5700	--	MPa	
180°C	5400	--	MPa	
200°C	5100	--	MPa	
Tensile Stress				ISO 527-2
Break	185	120	MPa	
Break, 120°C	108	--	MPa	
Break, 160°C	92.0	--	MPa	
Break, 180°C	84.0	--	MPa	
Break, 200°C	76.0	--	MPa	
Tensile Strain				ISO 527-2
Break	2.0	5.0	%	
Break, 120°C	5.0	--	%	
Break, 160°C	5.0	--	%	
Break, 180°C	5.0	--	%	
Break, 200°C	5.0	--	%	
Flexural Modulus	11000	5800	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method

Charpy Notched Impact Strength (23°C)	6.0	--	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	50	--	kJ/m ²	ISO 179/1eU
Notched Izod Impact Strength (23°C)	6.0	12	kJ/m ²	ISO 180/1A
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	290	--	°C	ISO 75-2/A
Melting Temperature	295	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	2.5E-5	--	cm/cm/°C	
Transverse	5.0E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+3	--	ohms·cm	IEC 60093
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			

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

