

DSM Stanyl® TW271B3 (PA46+PTFE)-CF15

Category : Polymer , Thermoplastic , Nylon , Nylon 46

Material Notes:

15% Carbon Reinforced, Heat Stabilized, Wear and Friction Modified

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Stanyl-TW271B3-PA46PTFE-CF15.php

Physical Properties	Metric	English	Comments
Density	1.32 g/cc	0.0477 lb/in³	dry; ISO 1183
Moisture Absorption	2.60 %	2.60 %	Sim. To ISO 62

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	120 MPa	17400 psi	cond; ISO 527-1/-2
	185 MPa	26800 psi	dry; ISO 527-1/-2
	76.0 MPa	11000 psi	ISO 527-1/-2
	@Temperature 200 °C	@Temperature 392 °F	
	84.0 MPa	12200 psi	ISO 527-1/-2
	@Temperature 180 °C	@Temperature 356 °F	
	92.0 MPa	13300 psi	ISO 527-1/-2
	@Temperature 160 °C	@Temperature 320 °F	
	108 MPa	15700 psi	ISO 527-1/-2
	@Temperature 120 °C	@Temperature 248 °F	
Elongation at Break	2.0 %	2.0 %	dry; ISO 527-1/-2
	5.0 %	5.0 %	cond; ISO 527-1/-2
	5.0 %	5.0 %	ISO 527-1/-2
	@Temperature 120 °C	@Temperature 248 °F	
	5.0 %	5.0 %	ISO 527-1/-2
	@Temperature 160 °C	@Temperature 320 °F	
	5.0 %	5.0 %	ISO 527-1/-2
	@Temperature 180 °C	@Temperature 356 °F	
	5.0 %	5.0 %	ISO 527-1/-2
	@Temperature 200 °C	@Temperature 392 °F	

Mechanical Properties	Metric	English	Comments
	12.5 GPa	1810 ksi	dry; ISO 527-1/-2
	5.10 GPa	740 ksi	ISO 527-1/-2
	@Temperature 200 °C	@Temperature 392 °F	
	5.40 GPa	783 ksi	ISO 527-1/-2
	@Temperature 180 °C	@Temperature 356 °F	
	5.70 GPa	827 ksi	ISO 527-1/-2
	@Temperature 160 °C	@Temperature 320 °F	
	6.30 GPa	914 ksi	ISO 527-1/-2
	@Temperature 120 °C	@Temperature 248 °F	
Flexural Modulus	5.80 GPa	841 ksi	cond; ISO 178
	11.0 GPa	1600 ksi	dry; ISO 178
Izod Impact Resistance	0.600 J/cm ²	2.86 ft-lb/in ²	dry; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.20 J/cm ²	5.71 ft-lb/in ²	cond; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	5.00 J/cm ²	23.8 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.600 J/cm ²	2.86 ft-lb/in ²	dry; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	25.0 µm/m-°C	13.9 µin/in-°F	dry; ISO 11359-1/-2
CTE, linear, Transverse to Flow	50.0 µm/m-°C	27.8 µin/in-°F	dry; ISO 11359-1/-2
Melting Point	295 °C	563 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 1.8 MPa (264 psi)	290 °C	554 °F	dry; ISO 75-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1000 ohm-cm	1000 ohm-cm	dry; IEC 60093

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