

DSM Stanyl® TW363 Nylon 46 (European Grade) (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 46 , Nylon 46, Unreinforced

Material Notes:

Stanyl is a high performance polyamide providing good performance and value across a broad range of automotive and electronic applications. Stanyl offers: Highest mechanical properties at high temperatures Excellent resistance to wear and low friction Outstanding flow for easy processing and exceptional design freedom Stanyl High Flow grades that match the best flowing LCPs while maintaining a high level of mechanical properties Key Applications: Automotive: Powertrain components, Charge-air coolers, EPS and ETC gears, Motor Sensors, Auto connectors, Chain tensioners E&E: Connectors, Microswitches, Bobbins, Memory modules, Motor components, Industrial, Specialty films and fibers, Consumer appliances Information provided by DSM.

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Stanyl-TW363-Nylon-46-European-Grade-Dry.php

Physical Properties	Metric	English	Comments
Density	1.10 g/cc	0.0397 lb/in ³	ISO 1183
Water Absorption	11 %	11 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	3.0 %	3.0 %	Humidity Absorption; Sim. to ISO 62
Linear Mold Shrinkage, Flow	0.020 cm/cm	0.020 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.020 cm/cm	0.020 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	60.0 MPa	8700 psi	ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	ISO 527-1/-2
Elongation at Yield	20 %	20 %	ISO 527-1/-2
Tensile Modulus	1.85 GPa	268 ksi	ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	2.60 J/cm ²	12.4 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	7.50 J/cm ²	35.7 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	160 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	88.9 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-1/-2
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
CTE, linear, Transverse to Flow	180 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	100 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-1/-2
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
Melting Point	295 $^{\circ}\text{C}$	563 $^{\circ}\text{F}$	10 $^{\circ}\text{C}/\text{min}$; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	200 $^{\circ}\text{C}$	392 $^{\circ}\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	90.0 $^{\circ}\text{C}$	194 $^{\circ}\text{F}$	ISO 75-1/-2
Vicat Softening Point	250 $^{\circ}\text{C}$	482 $^{\circ}\text{F}$	50 $^{\circ}\text{C}/\text{h}$ 50N; ISO 306
Glass Transition Temp, Tg	75.0 $^{\circ}\text{C}$	167 $^{\circ}\text{F}$	Glass Transition Temperature (10 $^{\circ}\text{C}/\text{min}$); ISO 11357-1/-2
Oxygen Index	27 %	27 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Dielectric Constant	3.2	3.2	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	3.6	3.6	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	25.0 kV/mm	635 kV/in	IEC 60243-1
Dissipation Factor	0.0012	0.0012	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0019	0.0019	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	475 V	475 V	IEC 60112

Descriptive Properties	Value	Comments
Heat stabilized or stable to heat	Yes	
High impact or impact modified	Yes	
Injection molding	Yes	

Other Extrusion Descriptive Properties	Yes Value	Comments
Platable	Yes	
Profile extrusion	Yes	
Without Fillers	Yes	

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