

DSM Stanyl® TW441 Nylon 46 (European and Asian Grade) (Dry)

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

Material Notes:

Stanyl is a high performance polyamide providing unmatched performance and value across an amazingly 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-TW441-Nylon-46-European-and-Asian-Grade-Dry.php

Physical Properties	Metric	English	Comments
Density	1.18 g/cc	0.0426 lb/in ³	ISO 1183
Viscosity Test	220 cm ³ /g	220 cm ³ /g	Viscosity Number
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	100 MPa	14500 psi	ISO 527-1/-2
Elongation at Break	40 %	40 %	ISO 527-1/-2
Elongation at Yield	10 %	10 %	ISO 527-1/-2
Tensile Modulus	3.30 GPa	479 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	0.900 J/cm ²	4.28 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.20 J/cm ²	5.71 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
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Thermal Properties	80.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ Metric	44.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ English	Comments
CTE, linear, Parallel to Flow	@Temperature 20.0 $^\circ\text{C}$	@Temperature 68.0 $^\circ\text{F}$	ISO 11359-1/-2
CTE, linear, Transverse to Flow	100 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 20.0 $^\circ\text{C}$	55.6 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 68.0 $^\circ\text{F}$	ISO 11359-1/-2
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)	280 $^\circ\text{C}$	536 $^\circ\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	190 $^\circ\text{C}$	374 $^\circ\text{F}$	ISO 75-1/-2
Vicat Softening Point	290 $^\circ\text{C}$	554 $^\circ\text{F}$	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
Flammability, UL94	V-2 @Thickness 0.750 mm	V-2 @Thickness 0.0295 in	IEC 60695-11-10
	V-2 @Thickness 1.60 mm	V-2 @Thickness 0.0630 in	IEC 60695-11-10

Descriptive Properties	Value	Comments
Injection molding	Yes	
Other Extrusion	Yes	

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