

Lanxess Durethan® T 40 000000 Partially aromatic polyamide

Category : Polymer , Thermoplastic , Nylon , Nylon, Aromatic

Material Notes:

Partially aromatic polyamide, injection molding and extrusion grade, transparent in all wall thicknesses, isotropic shrinkage, mechanical and electrical properties largely unaffected by conditioning state, meets the ISO 10993-1 biocompatibility tests

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lanxess-Durethan-T-40-000000-Partially-aromatic-polyamide.php

Physical Properties	Metric	English	Comments
Density	1.18 g/cc	0.0426 lb/in ³	ISO 1183
Water Absorption	6.0 %	6.0 %	Test Sim. to ISO 62
Moisture Absorption at Equilibrium	2.0 %	2.0 %	23°C/50% R.H.; Test Sim. to ISO 62
Viscosity Test	107 cm ³ /g	107 cm ³ /g	Viscosity number; ISO 307, 1157, 1628

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	90.0 MPa	13100 psi	Conditioned; ISO 527-1/-2
	110 MPa	16000 psi	ISO 527-1/-2
Elongation at Yield	5.0 %	5.0 %	Conditioned; ISO 527-1/-2
	6.0 %	6.0 %	ISO 527-1/-2
Tensile Modulus	3.00 GPa	435 ksi	ISO 527-1/-2
	3.30 GPa	479 ksi	Conditioned; ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	Conditioned; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	Conditioned; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties Charpy Impact, Notched	Metric ≤ 1.00 J/cm ²	English ≤ 4.76 ft-lb/in ²	Comments ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	≤ 1.00 J/cm ²	≤ 4.76 ft-lb/in ²	Conditioned; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	≤ 1.00 J/cm ²	≤ 4.76 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	≤ 1.00 J/cm ²	≤ 4.76 ft-lb/in ²	Conditioned; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 μm/m-°C	38.9 μin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	80.0 μm/m-°C	44.4 μin/in-°F	ISO 11359-1/-2
Deflection Temperature at 0.46 MPa (66 psi)	115 °C	239 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	105 °C	221 °F	ISO 75-1/-2
Vicat Softening Point	125 °C	257 °F	50°C/h 50N; ISO 306
Flammability, UL94	V-2	V-2	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-2	V-2	IEC 60695-11-10
	@Thickness 3.20 mm	@Thickness 0.126 in	

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
	1.00e+15 ohm-cm	1.00e+15 ohm-cm	Conditioned; IEC 60093
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	IEC 60093
Dielectric Constant	3.8	3.8	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Electrical Properties	Metric	English	Comments
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	Conditioned; IEC 60250
	4.3	4.3	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	4.6	4.6	Conditioned; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	25.0 kV/mm	635 kV/in	IEC 60243-1
	28.0 kV/mm	711 kV/in	Conditioned; IEC 60243-1
Dissipation Factor	0.040	0.040	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.048	0.048	Conditioned; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.090	0.090	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.11	0.11	Conditioned; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Form	Pellets	
ISO Shortname	ISO 1874-PA 6I,MT,12-030	
Processing	Injection molding	
	Other extrusion	
Region	Asia Pacific	
	Europe	
	Near East/Africa	
	North America	
	South and Central America	

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