

Azoty Tarnow™ Tarnamid® T-27 Polyamide 6 - Natural

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Unreinforced

Material Notes:

Medium viscosity injection molding grade, also used for compounding, for production of monofilament, bristles and fibers. Tarnamid® has the following main properties: High mechanical strength, rigidity and hardness High impact strength High vibration damping capacity Good fatigue strength Very good sliding properties, abrasion resistance, low coefficient of friction High thermal resistance, admissible temperature of continuous operation from -60°C to +150°C High chemical resistance, particularly to organic solvents, oils, lubricants and fuels Considerable moisture absorption influencing mechanical and electrical properties Self-extinguishing properties (fire retardant properties) Good electro-insulating properties Good optical properties, relatively good transparency of molded pieces with thickness below 3.2 mm made from natural Tarnamid® (not dyed and not compounded) Can be used for the production of goods coming into contact with food (grades fulfilling requirement of European Union Directive No 2002/72/EEC) with latest amendments Information provided by Azoty Tarnow™.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Azoty-Tarnow-Tarnamid-T-27-Polyamide-6-Natural.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.14 g/cc	1.14 g/cc	ISO 1183
Water Absorption	1.8 % @Time 86400 sec	1.8 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.014 cm/cm	0.014 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.014 cm/cm	0.014 in/in	ISO 294-4
Melt Flow	120 g/10 min @Load 5.00 kg, Temperature 275 °C	120 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	60.0 MPa @Load 36.5 kg	8700 psi @Load 80.5 lb	cond.; ISO 2039-1
	140 MPa @Load 36.5 kg	20300 psi @Load 80.5 lb	dry; ISO 2039-1
Tensile Strength, Yield	45.0 MPa	6530 psi	cond.; ISO 527
	78.0 MPa	11300 psi	dry; ISO 527
Elongation at Break	50 %	50 %	dry; ISO 527
	280 %	280 %	cond.; ISO 527

Tensile Modulus Mechanical Properties	1.10 GPa Metric	160 ksi English	cond.; ISO 527 Comments
	2.80 GPa	406 ksi	dry; ISO 527
Flexural Strength	28.0 MPa	4060 psi	cond.; ISO 178
	82.0 MPa	11900 psi	dry; ISO 178
Charpy Impact Unnotched	NB	NB	ISO 179 1eU
Charpy Impact, Notched	0.500 J/cm ²	2.38 ft-lb/in ²	dry; ISO 179 1eA
	1.20 J/cm ²	5.71 ft-lb/in ²	cond.; ISO 179 1eA

Thermal Properties	Metric	English	Comments
Melting Point	221 °C	430 °F	
Deflection Temperature at 1.8 MPa (264 psi)	50.0 °C	122 °F	cond.; ISO 75
	60.0 °C	140 °F	dry; ISO 75
Vicat Softening Point	195 °C @Load 5.10 kg	383 °F @Load 11.2 lb	ISO 306
Flammability, UL94	V-2 @Thickness 1.60 mm	V-2 @Thickness 0.0630 in	
Glow Wire Test	750 °C @Thickness 2.00 mm	1380 °F @Thickness 0.0787 in	PN-EN-60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+12 ohm-cm	1.00e+12 ohm-cm	cond.; IEC 93
	1.00e+15 ohm-cm	1.00e+15 ohm-cm	dry; IEC 93
Surface Resistance	1.00e+13 ohm	1.00e+13 ohm	cond.; IEC 93
	1.00e+15 ohm	1.00e+15 ohm	dry; IEC 93
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 243-1
Comparative Tracking Index	600 V	600 V	IEC 112

Processing Properties	Metric	English	Comments
Melt Temperature	230 - 290 °C	446 - 554 °F	
Mold Temperature	60.0 - 120 °C	140 - 248 °F	80 - 90°C is recommended

Processing Properties	75.0 - 100 °C Metric	12 °F English	Comments
Drying Temperature	@Time 7200 - 14400 sec	@Time 2.00 - 4.00 hour	
Moisture Content	<= 0.10 %	<= 0.10 %	
Injection Pressure	80.0 - 130 MPa	11600 - 18900 psi	80 MPa is recommended

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