

## Solvay Specialty Polymers Torlon® 4601 Polyamide-imide (PAI) (Unverified Data\*\*)

Category : Polymer , Thermoplastic , Polyamide-imide (PAI) , Polyamide-Imide, Extruded

### Material Notes:

Torlon 4601 is a specialty wear-resistant grade of polyamide-imide (PAI). Most Torlon PAI grades cannot be molded successfully in molds with undercuts. Torlon 4601 has been formulated to be moldable in tools with minor undercuts and give very good performance in lubricated wear applications. Torlon PAI has the highest strength and stiffness of any thermoplastic up to 275°C (525°F). It has outstanding resistance to wear, creep, and chemicals. Potential applications for Torlon 4601 polyamide-imide include ball bearing cages and other molded articles that require undercut tooling. Injection Notes: Minimum drying times are: 3 hours at 350°F, 4 hours at 300°F, or 16 hours at 250°F. Compression Ratio: 1:1 to 1.5:1 Begin hold pressure at a high setting 6,000-8,000 psi (41.37-55.16 MPa), for several seconds, then drop off to 3,000-5,000 psi (20.69-34.48 MPa), for the duration of the hold pressure sequence. Molded parts must be cured. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Solvay-Specialty-Polymers-Torlon-4601-Polyamide-imide-PAI-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Torlon-4601-Polyamide-imide-PAI-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.39 g/cc	1.39 g/cc	ASTM D792

Mechanical Properties	Metric	English	Comments
Tensile Strength	121 MPa	17500 psi	ASTM D638
Elongation at Break	4.1 %	4.1 %	ASTM D638
Tensile Modulus	4.21 GPa	611 ksi	ASTM D638
Flexural Strength	182 MPa	26400 psi	ASTM D790
Flexural Modulus	4.48 GPa	650 ksi	ASTM D790
Shear Strength	108 MPa	15700 psi	ASTM D732
Izod Impact, Notched	2.30 J/cm	4.31 ft-lb/in	ASTM D256
	3.70 J/cm	6.93 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	284 °C	543 °F	Unannealed; ASTM D648

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	304 °C	579 °F	
Nozzle Temperature	371 °C	700 °F	

Processing Properties	Metric	English	Comments
Mold Temperature	193 - 216 °C	380 - 421 °F	
Drying Temperature	177 °C	351 °F	
Dry Time	3.00 hour	3.00 hour	
Moisture Content	0.050 %	0.050 %	
Back Pressure	6.89 MPa	999 psi	
Screw Speed	50 - 100 rpm	50 - 100 rpm	

Descriptive Properties	Value	Comments
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Flame Retardant	
	Good Chemical Resistance	
	Good Creep Resistance	
	Good Wear Resistance	
	High Heat Resistance	
	High Temperature Strength	
Forms	Pellets	
Generic	PAI	
Processing Method	Injection Molding	
	Machining	
	Profile Extrusion	
Screw L/D Ratio	18.0:1.0 to 24.0:1.0	
Uses	Bearings	
	Industrial Applications	

## **Contact Songhan Plastic Technology Co.,Ltd.**

**Website : [www.lookpolymers.com](http://www.lookpolymers.com)**

**Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)**

**Tel : +86 021-51131842**

**Mobile : +86 13061808058**

**Skype : lookpolymers**

**Address : United North Road 215,Fengxian District, Shanghai City,China**