

Solvay Specialty Polymers Torlon® 4200 Polyamide-imide (PAI) (Unverified Data**)

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

Material Notes:

Torlon 4200 is an unreinforced, unpigmented grade of polyamide-imide (PAI) resin for extrusion. This grade is designed for applications in the semiconductor industry which cannot tolerate particulates such as metals or inorganic particles migrating from the polymer. Torlon 4200 has the best impact resistance and greatest elongation of all the Torlon grades. 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. - High Flow: Torlon 4200
EXTInformation provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Torlon-4200-Polyamide-imide-PAI-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.42 g/cc	1.42 g/cc	ASTM D792
Water Absorption	0.33 %	0.33 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0060 - 0.0085 cm/cm	0.0060 - 0.0085 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength	152 MPa	22000 psi	Type I; ASTM D638
Tensile Stress	192 MPa	27800 psi	ASTM D1708
Elongation at Break	7.6 %	7.6 %	Type I; ASTM D638
	15 %	15 %	
Tensile Modulus	4.48 GPa	650 ksi	Type I; ASTM D638
	4.90 GPa	711 ksi	
Flexural Strength	118 MPa	17100 psi	ASTM D790
	@Temperature 232 °C	@Temperature 450 °F	
Flexural Modulus	241 MPa	35000 psi	ASTM D790
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	3.59 GPa	521 ksi	ASTM D790
	@Temperature 232 °C	@Temperature 450 °F	
Flexural Modulus	5.03 GPa	730 ksi	ASTM D790
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Compressive Modulus	4.00 GPa	580 ksi	ASTM D695
Poissons Ratio	0.45	0.45	Value linked with measurement setup; ASTM E132
Shear Modulus	1.54 - 1.69 GPa	223 - 245 ksi	Calculated
Izod Impact, Notched	1.40 J/cm	2.62 ft-lb/in	ASTM D256
	11.0 J/cm	20.6 ft-lb/in	ASTM D4812

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	31.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	17.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	TMA; ASTM E831
Thermal Conductivity	0.260 W/m-K	1.80 BTU-in/hr-ft ² -°F	ASTM C177
Deflection Temperature at 1.8 MPa (264 psi)	278 °C	532 °F	Unannealed; ASTM D648

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+17 ohm-cm	2.00e+17 ohm-cm	ASTM D257
Surface Resistance	5.00e+18 ohm	5.00e+18 ohm	ASTM D257
Dielectric Constant	3.9	3.9	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	4.2	4.2	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Dissipation Factor	0.026	0.026	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Dielectric Strength	23.0 kV/mm	584 kV/in	ASTM D149
Dissipation Factor	0.031	0.031	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	304 °C	579 °F	
Nozzle Temperature	371 °C	700 °F	
Mold Temperature	199 - 216 °C	390 - 421 °F	

Processing Properties	Metric	English	Comments
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	Ductile	
	Flame Retardant	
	Good Chemical Resistance	
	Good Creep Resistance	
	Good Electrical Properties	
	Good Wear Resistance	
	High Heat Resistance	
	High Temperature Strength	
	Ultra High Impact Resistance	
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	Electrical/Electronic Applications	

Descriptive Properties	Machine/Mechanical Parts Value	Comments
Semiconductor Molding Compounds		

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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