

Solvay Specialty Polymers Torlon® 4203 Polyamide-imide (PAI) (discontinued **)

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

Material Notes:

Torlon 4203 is an unreinforced, lubricated, pigmented grade of polyamide-imide (PAI) resin for extrusion. It 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. Torlon 4203 offers outstanding electrical properties, which makes it ideal for high performance parts such as connectors, switches and relays. In addition Torlon 4203 polyamide-imide can be used in applications such as thrust washers, spline liners, valve seats, bushings, bearings, wear rings, cams and other applications requiring strength at high temperature and resistance to wear. - High Flow: Torlon 4203 EXT - Higher Flow: Torlon 4203 HQ - Highest Flow: Torlon 4203 HHQ Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Torlon-4203-Polyamide-imide-PAI-nbspdiscontinued-.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	

Mechanical Properties	5.03 GPa Metric	730 ksi English	Comments ASTM D150
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Strength	221 MPa	32100 psi	ASTM D695
Compressive Modulus	4.00 GPa	580 ksi	ASTM D695
Poissons Ratio	0.45	0.45	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	31.0 µm/m-°C	17.2 µin/in-°F	ASTM D696
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	

Processing Properties	Metric	English	Comments
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	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	
RoHS Compliance	RoHS Compliant	

Descriptive Properties	Value	Comments
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