

Product Data Sheet

Torlon® 4203L & 4203

Drake Plastics Extruded

Torlon 4203L is non reinforced polyamide-imide. It is the toughest and most impact resistant of the standard Torlon grades. It has excellent dielectric properties and is also the best PAI thermal insulator making it ideal for

- Valve components requiring high strength and dimensional stability
- Rollers, wheels and balls
- Aerospace electrical components requiring high strength, heat resistance and V-0 flammability
- Thermal insulators and isolators

Material Notes: Resin used to produce Torlon 4203L shapes was historically designated as 4203. As of 2020, all of Drake Plastics production, regardless of form is made from 4203L resin. Other manufacturers still produce shapes from 4203 resin, however.

Physical Properties	Metric	English	Methods
Specific Gravity	1.41 g/cc	.051 lb/in ³	ASTM D792
Water Absorption	0.4%	0.4 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	1.7%	1.7 %	Immersion; ASTM D570(2)

Mechanical Properties*

Hardness, Rockwell M		M120	ASTM D785
Hardness, Rockwell		E80	ASTM D785
Hardness, Shore D		90	ASTM D2240
Tensile Strength, Ultimate	138 MPa	20,000 psi	ASTM D638
Elongation at Break	20 %	20 %	ASTM D638
Tensile Modulus	4 136 MPa	600,000 psi	ASTM D638
Flexural Modulus	4 136 MPa	600,000 psi	ASTM D790
Flexural Yield Strength	165 MPa	24,000 psi	ASTM D790
Compressive Strength	165 MPa	24,000 psi	10% Def.; ASTM D695
Compressive Modulus	3 296 MPa	478,000 psi	ASTM D695
Izod Impact (notched)	105 J/m	2.0	ASTM D256 Type A

Thermal Properties

Melt Point/T _g	275°C	527°F	ASTM D3418
Heat Deflection Temp (264 psi)	278°C	532°F	ASTM TMA
Coefficient of Linear Thermal Expansion	3.1x 10 ⁻⁵ / °C	1.7x 10 ⁻⁵ / °F	E831 TMA

*The mechanical properties of extruded shapes may differ from the values published by resin producers. Published resin data is always generated from injection molded test specimens produced under ideal conditions.

Drake's extruded shape values are generated using specimens machined from actual shapes and may reflect surface imperfections from machining, the lack of cured surfaces on our specimens (PAI), different specimen sizes, different flow profiles, and molecular weight increases from our processes which enhance toughness and elongation.