



# Product Data Sheet

## Drake PAI Thin Sheet/Film

Drake PAI Thin Sheet/Film is a non-reinforced polyamide-imide. The material possesses the high strength, surface hardness, temperature & wear resistance that is typical of unreinforced PAI.

- Excellent thermal & electric insulation properties
- Can be easily die cut & bonded to other substrates, including metals.
- Performance from cryogenic to 260°C / 500°F, depending on the application.

**Material Notes:** Material is similar to Tordon 4203L. Drake CoC included. Available in 0.3mm (0.012") up to 2mm (0.079") thicknesses.

Physical Properties	Metric	English	Methods
Specific Gravity	1.41	1.41	ASTM D792
Water Absorption	0.4%	0.4%	Immersion, 24hr, ASTM D570
Water Absorption @ Saturation	1.7%	1.7%	Immersion; ASTM D570

### Mechanical Properties\*

Tensile Strength, Ultimate	141 MPa	20,400 psi	Drake Method***; ASTM D638
Elongation @ Break**	28%	28%	Drake Method***; ASTM D638
Tensile Modulus	4700 MPa	680,000 psi	Drake Method***; ASTM D638

### Thermal Properties

Glass Transition - °Tg	275°C	527°F	ASTM D3418
Heat Deflection Temperature (264psi)	278°C	532°F	E831 TMA
CLTE	30.6 ppm/°C	17.0 ppm/°F	DIN 51909
Thermal Conductivity	0.26 W/m*K	1.80 Btu*in/hr*ft <sup>2</sup> *°F	ASTM F433

\* 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. \*

\*\* Elongation properties are dependent on crystallization and vary by manufacturing methods & cooling rates. \*\*

\*\*\* Tensile bars were prepared and tested per ASTM D638 Type V. 2mm (0.079") thick material was utilized, deviating from the 3.2mm (0.125") standard thickness used in ASTM D638 Type V bars. The values reported are averages from 5 test specimens. Application specific testing should be done to verify material suitability. \*\*\*