More About Teflon-Filled Delrin (Delrin AF)

Sheets and Rods

Common applications for this material include bushings and bearings.
Meet the following standard: UL 94HB for flammability.

Tensile Strength:	7600 psi per ASTM D638
Impact Strength:	1.2 ft.-lbs./in. per ASTM D256
Coefficient of Friction:	.08 static/.14 dynamic
Dielectric Strength:	400 V/mil per ASTM D149
Hardness:	Rockwell R: 118 per ASTM D785
Coefficient of Thermal Expansion:	6.8×10^{-5} in./in./°F per ASTM D696
Weather Resistance:	Do not use outdoors. Material will chalk and become brittle.
Processing:	*Machinability:* Good machinability; machines similar to light brass. *Molding:* Can be molded. *Welding:* Can be welded. *Thermoforming:* Not recommended. Material is crystalline and must be heated close to its melting point to soften.
Scratch Resistance:	Fair.
Chemical Resistance:	Use with gasoline, diesel fuel, alcohol, and turpentine. Do not use with chlorinated chemicals and acids.

Discs

Common applications for this material include bearings and gears.
Meet the following standard: ASTM D4181.

Tensile Strength:	7600 psi per ASTM D638
Impact Strength:	1.2 ft.-lbs./in. per ASTM D256
Coefficient of Friction:	.16
Dielectric Strength:	400 V/mil per ASTM D149
Hardness:	Rockwell R: 118 per ASTM D785
Coefficient of Thermal Expansion:	6.8×10^{-5} in./in./°F per ASTM D696
Weather Resistance:	Use indoors.
Processing:	*Machinability:* Easy to machine using standard tooling. *Molding:* Can be molded. *Welding:* Can be welded. *Thermoforming:* Not recommended.
Scratch Resistance:	Good.
Chemical Resistance:	Resistant to ammonia and benzene. Use with gasoline, diesel fuel, alcohol, and turpentine. Do not use with chlorinated chemicals.

Tensile Strength—The maximum pulling force a material can withstand without breaking. It is usually measured in pounds per square inch (psi). A larger number indicates a stronger material.

Impact Strength—The ability of a material to withstand shock loading. Determined by the notched Izod test, which measures the effect on a material when it is suddenly impacted by a swinging pendulum. A larger number signifies greater impact resistance.

Coefficient of Friction—The ratio of the frictional force between two surfaces in contact, to the force with which the surfaces press against each other. A lower value indicates a material that moves more easily, or with less friction.

Short-Term Dielectric Strength—The maximum voltage a material can withstand without rupture, measured as volts per millimeter of thickness. This is an indication of how effective the material is as an electrical insulator. A higher value signifies a better insulator.

Coefficient of Thermal Expansion—The amount a material increases in volume as the temperature rises. A smaller coefficient is an indicator of less thermal expansion.

The following graphs are provided for comparative purposes only. They do not correspond to specific items in our catalog.