

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:	<i>Machinability:</i> Good machinability; machines similar to light brass. <i>Molding:</i> Can be molded. <i>Welding:</i> Can be welded. <i>Thermoforming:</i> 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:	<i>Machinability:</i> Easy to machine using standard tooling. <i>Molding:</i> Can be molded. <i>Welding:</i> Can be welded. <i>Thermoforming:</i> 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.

This information is to advise you on current technical knowledge for comparative purposes only. It is given without obligation or liability. No warranty of fitness for a particular purpose or application is made.

More About Plastics

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.

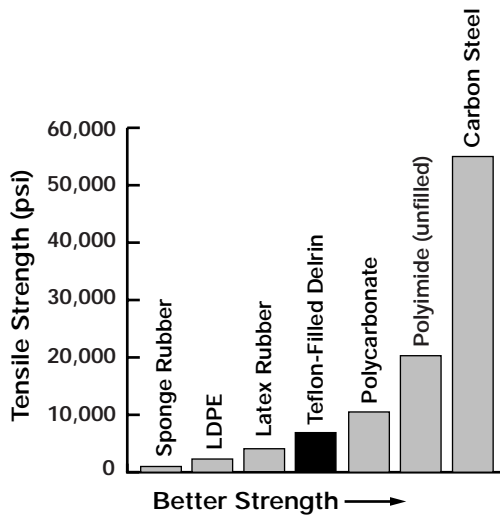
Coefficient of Friction—The ratio of the frictional force between two surfaces in contact, to the force with which the surfaces press against each other. A lower value indicates a material that moves more easily, or with less friction.

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.

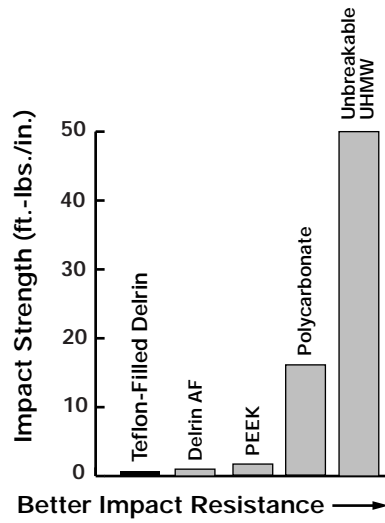
Coefficient of Thermal Expansion—The amount a material increases in volume as the temperature rises. A smaller coefficient is an indicator of less thermal expansion.

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

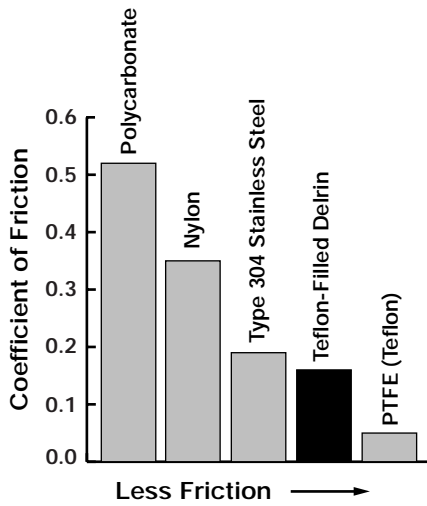
Tensile Strength



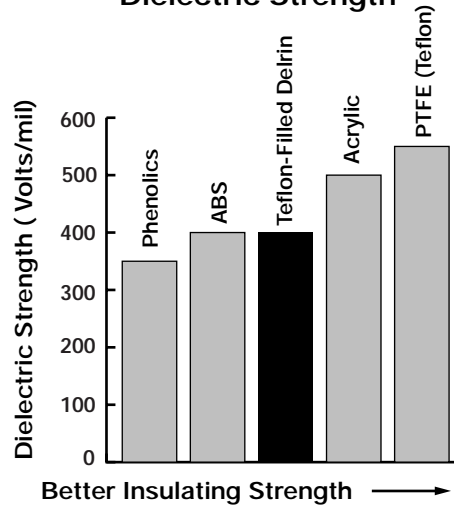
Impact Strength



Coefficient of Friction



Short-Term Dielectric Strength



Coefficient of Thermal Expansion

