

More About Black Delrin

Sheets and Rods



Common applications for this material include parts exposed to a moist or wet environment such as pump or valve components. Also gears, bearings, bushings, rollers, and fittings.

Meet the following standard: UL 94HB for flammability.

Tensile Strength:	10,000 psi per ASTM D638
Impact Strength:	2.3 ft.-lbs./in. per ASTM D256
Coefficient of Friction:	.2
Dielectric Strength:	500 V/mil per ASTM D149
Hardness:	Rockwell M: 94 per ASTM D785
Coefficient of Thermal Expansion:	6.8×10^{-5} in./in./°F per ASTM D696
Weather Resistance:	Material is not UV stable. Over time, exposure to UV light will cause discoloration.
Processing:	<i>Machinability:</i> Easy to machine. <i>Molding:</i> Can be molded. <i>Welding:</i> Can be welded. <i>Thermoforming:</i> Not recommended.
Scratch Resistance:	Material has good abrasion properties.
Chemical Resistance:	Use with fuels, solvents, hydrocarbons, and neutral chemicals. Do not use with acids and strong bases.

Discs



Common applications for this material include gears and bearings.

Meet the following standards: ASTM D4181 and UL 94HB for flammability.

Tensile Strength:	10,000 psi per ASTM D638
Impact Strength:	2.0 ft.-lbs./in. per ASTM D256
Coefficient of Friction:	No test data available
Dielectric Strength:	No test data available
Hardness:	Rockwell R: 120 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. <i>Molding:</i> Can be molded. <i>Welding:</i> Can be welded. <i>Thermoforming:</i> Not recommended.
Scratch Resistance:	Not scratch resistant.
Chemical Resistance:	Use with fuels, solvents, hydrocarbons, and neutral chemicals. Do not use with acids and strong bases.

Rectangular Bars and Square Bars



Common applications for this material include bearings, bushings, fuel system parts, gears, pulleys, springs, sprockets, rollers, valve seats, and seals.

Meet the following standard: UL 94HB for flammability.

Tensile Strength:	9,600-11,000 psi per ASTM D638
Impact Strength:	1.2 ft.-lbs./in. per ASTM D256
Coefficient of Friction:	.35
Dielectric Strength:	500 V/mil per ASTM D149
Hardness:	Rockwell M: 94 per ASTM D785
Coefficient of Thermal Expansion:	6.8×10^{-5} in./in./°F per ASTM D696
Weather Resistance:	For indoor use. Material will degrade with UV exposure.
Processing:	<i>Machinability:</i> Easy to machine. <i>Molding:</i> Can't be molded. <i>Welding:</i> Can be welded using vibration or sonic welding. <i>Thermoforming:</i> Can be thermoformed.
Scratch Resistance:	Material has fair abrasion properties.
Chemical Resistance:	High chemical resistance. Use with alcohols, aliphatics, aromatics, aldehydes, ketones, ethers, esters, oils, greases, gasoline, diesel and methanol based fuels, and agricultural chemicals. Do not use with strong acids, strong bases, ethyl acetate, bleach, strong oxidizing agents, phenol, mineral acids, and ethylene glycol.

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.

