

## More About Polyimide (VespeI®)

### Rods



Common applications for this material include seals, bushings, handling fixtures, semiconductor processing, valve seats, and wear pads.

Meet the following standards: AMS 3644C, Mil. Spec. R-46198, ASTM D6456; and UL 94-5V and UL 94V0 for flammability.

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<b>Tensile Strength:</b>	12,500 psi per ASTM D1708
<b>Impact Strength:</b>	0.8 ft.-lbs./in. per ASTM D256
<b>Coefficient of Friction:</b>	0.29 (ASTM not rated)
<b>Dielectric Strength:</b>	560 V/mil per ASTM D149
<b>Hardness:</b>	Rockwell E: 45-60 per ASTM D785
<b>Coefficient of Thermal Expansion:</b>	$30 \times 10^{-6}$ in./in./°F per ASTM E228
<b>Weather Resistance:</b>	Use indoors. Not intended for long-term UV light exposure.
<b>Processing:</b>	<i>Machinability:</i> May be machined using standard metalworking equipment and techniques. <i>Molding:</i> Not recommended. <i>Welding:</i> Not recommended. <i>Thermoforming:</i> Not recommended.
<b>Scratch Resistance:</b>	Not scratch resistant.
<b>Chemical Resistance:</b>	Can be used with most fuels, solvents, lubricants, and hydraulic fluids. Avoid using this material with bases and strong acids.

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*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.

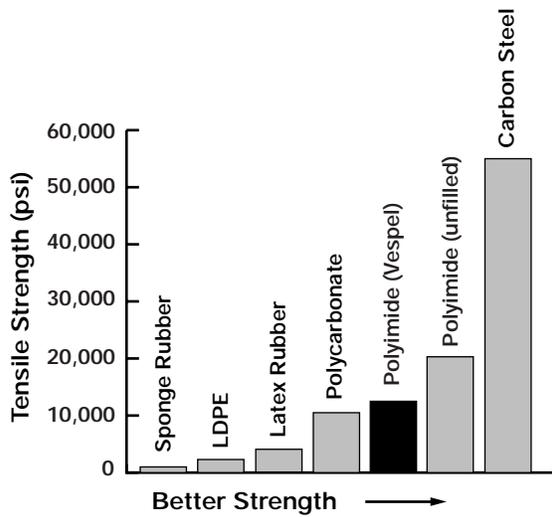
**Coefficient of Friction**—The ratio of the frictional force between two surfaces in contact, to the force with which the surfaces press against each other. A lower value indicates a material that moves more easily, or with less friction.

**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.

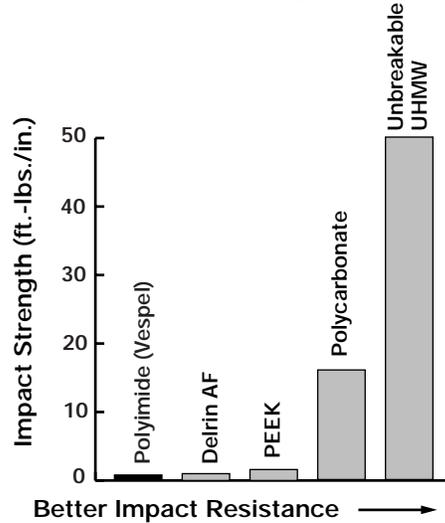
**Coefficient of Thermal Expansion**—The amount a material increases in volume as the temperature rises. A smaller coefficient is an indicator of less thermal expansion.

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

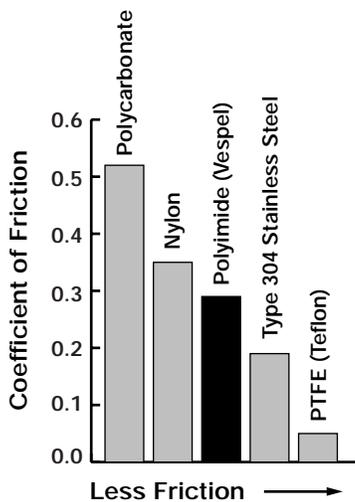
### Tensile Strength



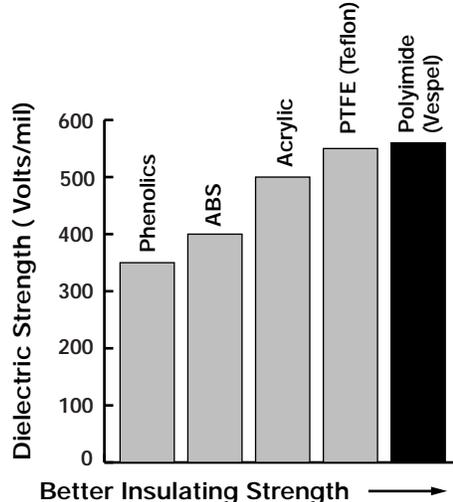
### Impact Strength



### Coefficient of Friction



### Short-Term Dielectric Strength



### Coefficient of Thermal Expansion

