



\*\* TORLON® is the registered trademark of

**MITSUBISHI CHEMICAL  
ADVANCED MATERIALS**

### PRODUCT CAPABILITIES:

- Rod : 1/4" - 2"
- Sheet : 1/4" - 1"

### ADVANTAGES:

- High Stiffness / Strength
- Low Coefficient Of Friction
- Excellent Chemical Resistance
- Good Wear Resistance
- Good Radiation Resistance
- Dimensional Stability
- Wide Operating Range (-190°C To +260°C)

### PRODUCT COLORS:

- Dark Black Green

### APPLICATIONS INCLUDE:

- Bearings
- Piston Rings
- Strips
- Seals
- Thrust Washers
- Vanes And Valve Seats
- Wear Pads
- Wafer Processing

GENERAL PROPERTIES	ASTM or UL Test	TORLON® 4301 Typical Values
<b>PHYSICAL</b>		
Specific Gravity (g/cm <sup>3</sup> )	D792	1.45
Water Absorption, 24 hrs (%)	D570	0.4
<b>MECHANICAL</b>		
Tensile Strength (psi)	D638	15,000
Tensile Modulus (psi)	D638	900,000
Tensile Elongation at Break (%)	D638	3
Flexural Strength (psi)	D790	23,000
Flexural Modulus (psi)	D790	800,000
Compressive Strength (psi)	D695	22,000
Hardness, Rockwell	D785	E70
IZOD Notched Impact (ft-lb/in)	D256	0.8
<b>THERMAL</b>		
Coeff. of Thermal Expansion (x 10 <sup>-5</sup> in./in./°F)	E831	1.4
Heat Deflection Temp (°F / °C) @ 264 psi	D648	534 / 279
Glass Transition Temp (°F / °C)	D3418	527 / 275
Max Operating Temp (°F / °C)	-	500 / 260
Thermal Conductivity (BTU-in/ft <sup>2</sup> -hr-°F)	F433	3.7
Flammability Rating	UL94	V-0
<b>ELECTRICAL</b>		
Dielectric Strength (V/mil) short time, 1/8" thick	D149	-
Dielectric Constant at 1 MHz	D150	6
Dissipation Factor at 1 MHz	D150	0.037
Surface Resistivity (ohm/sq)	ANSI / ESD STM 11.11	> 10 <sup>13</sup>
vOLUME Resistivity (ohm.cm)	IEC 60093	> 10 <sup>13</sup>

NOTE: The information contained here in is typical values intended for reference only. They should NOT be used as a basis for design specifications or quality control.