

TECHNICAL DATA SHEET

Rulon

Rulon® is the trade name for a family of PTFE plastics. Rulon® plastics are known for their low coefficient of friction, excellent abrasion resistance, wide range of operating temperatures, and chemical inertness while operating without lubrication.

Grades of Rulon

RULON® J

has the lowest coefficient of friction of all the reinforced PTFE grades. It has the ability to run on non-ferrous and non-metallic mating surfaces such as 316 stainless steel and brass.

RULON® LR

is a filled PTFE material modified to increase the material's mechanical properties. The resulting material exhibits slightly more load capacity than Rulon® AR with a corresponding decrease in flexibility. Rulon® LR is a standard bearing material and is used in sleeve, flange, thrust, and linear bearing applications.

RULON® AR

the original Rulon® material, AR has the best combination of flexibility and load carrying properties. It is recommended for seal applications. Rulon® AR is a good electrical insulator and has excellent chemical resistance.

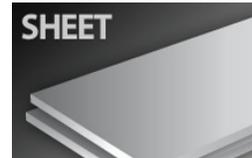
Benefits

- Self-lubricating
- Flexible
- Chemical resistance
- Light weight
- Dimensional stability in liquids
- Low temperature to -400°F
- High temperature to 550°F.
- Corrosion resistance
- Wear resistance

Applications

- Seals
- Piston rings
- Bearings

SHAPES AVAILABLE



SEE NEXT PAGE FOR ADDITIONAL INFORMATION



TYPICAL PROPERTIES of RULON® filled PTFE

| ASTM or UL test | Property | Rulon® LR (maroon) | Rulon® J (gold) | Rulon® 641 (white) | Rulon® AR (maroon) |
|--|---|--------------------------------|----------------------|--------------------|----------------------|
| PHYSICAL | | | | | |
| D792 | Density (lb/in ³) (g/cm ³) | 0.082 2.27 | 0.070 1.95 | 0.081 2.25 | 0.081 2.24 |
| D2240 | Hardness, Shore D | 60-75 | 60 | 60 | 60-75 |
| D570 | Water Absorption, 24 hrs (%) | 0 | 0 | 0 | 0 |
| MECHANICAL | | | | | |
| D1457 | Tensile Strength (psi) | 1,500 | 2,000 | 2,000 | 2,000 |
| D1457 | Tensile Elongation at Yield (%) | 150 | 180 | 175 | 175 |
| D256 | IZOD Notched Impact (ft-lb/in) | 6.0 | - | - | 6.0 |
| THERMAL | | | | | |
| D696 | Coefficient of Linear Thermal Expansion (x 10 ⁻⁵ in./in./°F) | varies widely with temperature | | | |
| Cenco-Fitch | Thermal Conductivity (BTU-in/ft ² -hr-°F) (x 10 ⁻⁴ cal/cm-sec-°C) | 2.30 7.92 | 1.70 5.86 | 2.60 8.96 | 2.30 7.92 |
| D635 | Flammability (in/min) | None | None | None | None |
| ELECTRICAL | | | | | |
| D149 | Dielectric Strength (V/mil) short time, .08" thick | 400-500 | 200 | - | 400-500 |
| D150 | Dielectric Constant at 1 MHz | 2.5 | 2.4 | - | 2.5 |
| D150 | Dissipation Factor at 1 MHz | 0.003 | 0.001 | - | 0.003 |
| D257 | Surface Resistivity (ohm-cm) at 50% RH | 2 x 10 ¹³ | 6 x 10 ¹⁸ | - | 2 x 10 ¹³ |
| D257 | Volume Resistivity (ohm-cm) at 50% RH | 1 x 10 ¹⁵ | 8 x 10 ¹⁸ | - | 1 x 10 ¹⁵ |
| RECOMMENDED OPERATING LIMITS | | | | | |
| Maximum Load (psi) | | 1,000 | 1,000 | 1,000 | 1,000 |
| Maximum Velocity with No Pressure (ft/min) | | 400 | 400 | 400 | 400 |
| Maximum PV Rating (psi x ft/min) | | 10,000 | 10,000 | 10,000 | 10,000 |
| Maximum Operating Temp (°F / °C) | | 500 / 260 | 500 / 260 | 500 / 260 | 500 / 260 |
| Minimum Operating Temp (°F / °C) | | -450 / -240 | -450 / -240 | -450 / -240 | -450 / -240 |
| Minimum Mating Surface Hardness (Rockwell) | | C35 | B25 | B25 | C35 |

RULON is a registered trademark of Saint-Gobain Performance Plastics Corporation.
TURCITE is a registered trademark of the Trelleborg Sealing Solutions.

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets.
All values at 73°F (23°C) unless otherwise noted.