DMR™

Fiber-Lube™

Rulon®1439 FDA Series

Typical Product & Application Descriptions

Products	Applications
* Automatically molded bearings & components	* Transmissions
* Sleeve, flanged & thrust bearings	* Air Compressors
* Piston rings	* Appliances
* Stamped & formed seals	* Pillow blocks
* Extruded shapes	* Linear slides
* Machined parts	* Fluid transfer systems
* Molded parts	* Vacuum Pumps
	* Valves
	* Food Processing Equipment

Rulon® 1439 is a white FDA and USDA compliant material that is suitable for immersed service with better wear characteristics than most other PTFE compounds.

Its colour makes it aesthetically pleasing for food and pharmaceutical applications. This material is also resistant to many harsh chemicals found in the application environments where it is typically used.

It is compatible with most commercially available lubricants for additional reduction in friction. Its properties allow it to be effectively utilized as a bearing or sliding surface.

DESIGN CRITERIA

Temperature - Typical Range °F (°C)	-400/+550 (-240/+288)
Maximum PV (continuous)(MPa•m/s)	10,000 (0.35)*
Maximum P - psi (static)(MPa)	1,000 (6.9)*
Maximum V - SFM (no load) (m/s)	400 (2)*
Shaft Hardness- Minimum	Rb25
Shaft finish recommended Ra µin(µm)	8 - 16 (0.2-0.4)*
Shaft Material	Stainless to Hardened Steel
ENGINEERING INFORMATION	
Friction - static & dynamic	0.15 - 0.25
Flammability ASTM D635	Non-Flammable
Chemical Resistance	Data Available
Linear Coefficient of 78° to 400°F	Diameter 4.8 (8.6)*
Thermal Expansion (26° to 204°C) x 10 -5 in/in °F (x 10 -5 m/m °C)	Length 5.7 (10.2)*
Physical Data	
Elongation ASTM D4894	190%
Tensile Strength ASTM D4894 (MPa)	1800 psi (12.4)*
Deformation ASTM 621	2% (1500 psi - 24 hr. RT)
Specific Gravity ASTM D792	2.60

Essential components for industry

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T0G-064

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Fluoropolymers (PTFE)- More commonly known as PTFE. This material exhibits a unique combination of heat resistance and low friction together with outstanding chemical and good electrical properties. Continuous use temperatures range -400°F to +500°F, no moisture absorption, high arc resistance, and is self lubricating with a low coefficient of friction. Many grades available.

Rulon® 1439- One of Saint-Gobain trade names for their family of reinforced proprietary PTFE compounds (see also Fluoroloy). This family of materials offers the combination of high compressive strengths, low coefficient of friction, and excellent abrasion and corrosion resistance.

Ideal for Submerged Applications

TECHNICAL SPECIFICATIONS		
Specific Gravity, 73°F	2.5-2.6	
Tensile Strength @ Yield, 73°F	1,500	psi
Tensile Elongation (at break), 73°F	100	%
Deformation Under Load	2.0	%
Hardness, Durometer (Shore "D" scale)	63	
Coefficient of Friction (Dry vs Steel) Static	0.15	
Coefficient of Friction (Dry vs Steel) Dynamic	0.25	
Maximum Static Bearing Load (P)	1,000	psi
Maximum Unlubricated No Load Bearing Velocity (V)	400	ft/minute
Maximum Limiting PV (Unlubricated)	10,000	psi x ft/min.
Minimum Mating Surface Hardness	Rb25	Rockwell (Brinnell)
Coefficient of Linear Thermal Expansion	4.8-5.7	in/in/ °F x 10-5
Embrittlement Temperature	-400	°F Min.
Continuous Service Temperature in Air	+550	°F Max.
Short Term Service Temperature	+600	°F Max.
Flammability @ 3.1mm (1/8 in.) UL 94	NB	
Water Absorption, Immersion 24 Hours	0	%
Water Absorption, Immersion Saturation	0	%
Machinability Rating	3	1 = easy, 10 = difficult
Agency Approval	FDA Compliant	

Rulon® ,a Saint-Gobain brand

T0G-064