Arlon® 1000

Polytetrafluoroethylene + PI

Greene, Tweed & Co.

Message:

Greene, Tweed's Arlon® 1000, a tough, hig temperature, semi-crystalline thermoplastic, offers a unique combination of mechanical, thermal and chemical propertier. Arlon 1000 features superior compressive strength and minimum creep, as well as broad chemical resistance. Arlon is an excellent choice for applications such as valve seats and bushings greater abrasion resistance and lower wear and better fatigue properties than other thermoplastics.

General Information					
Features	Acid Resistant				
	Alkali Resistant				
	Base Resistant				
	Fatigue Resistant				
	Food Contact Acceptable				
	Good Abrasion Resistance				
	Good Chemical Resistance				
	Good Compressive Strength				
	Good Creep Resistance				
	Good Toughness				
	Good Wear Resistance				
	Low Extractables				
	Radiation (Gamma) Resistan	t			
	Semi Crystalline				
Uses	Bushings				
	Valves/Valve Parts				
Agency Ratings	FDA 21 CFR 177.2415				
Appearance	Tan				
Forms	Pellets				
Processing Method	Injection Molding				
Physical	Nominal Value	Unit	Test Method		
Specific Gravity	1.30	g/cm³	ASTM D792		
Hardness	Nominal Value	Unit	Test Method		
Rockwell Hardness (M-Scale)	104		ASTM D785		
Durometer Hardness (Shore D)	88		ASTM D2240		
Mechanical	Nominal Value	Unit	Test Method		
Tensile Modulus - 0.5% Secant	4240	МРа	ASTM D638		
Tensile Strength			ASTM D638		
Yield	108	МРа			
Break	96.5	MPa			

Tensile Elongation (Break)	35	%	ASTM D638
Flexural Modulus - 0.5% Secant	4140	MPa	ASTM D790
Flexural Strength	174	MPa	ASTM D790
Compressive Strength ¹	131	MPa	ASTM D695
Shear Strength			ASTM D732
2	85.5	MPa	
³	85.5	MPa	
Coefficient of Friction ⁴ (vs. Itself -			
Dynamic)	0.29		ASTM G77
Deformation Under Load	0.0900	%	ASTM D621
Wear Factor	100	10^-8 mm³/N·m	ASTM G77
Thermal	Nominal Value	Unit	Test Method
	Nominal Value	Unit	Test Method
Thermal Deflection Temperature Under Load (1.8 MPa, Unannealed)	Nominal Value	Unit °C	Test Method ASTM D648
Deflection Temperature Under Load (1.8			
Deflection Temperature Under Load (1.8 MPa, Unannealed)			ASTM D648
Deflection Temperature Under Load (1.8 MPa, Unannealed) CLTE - Flow	177	°C	ASTM D648
Deflection Temperature Under Load (1.8 MPa, Unannealed) CLTE - Flow < 149°C	177 4.7E-5	°C cm/cm/°C	ASTM D648
Deflection Temperature Under Load (1.8 MPa, Unannealed) CLTE - Flow < 149°C > 149°C	177 4.7E-5	°C cm/cm/°C	ASTM D648
Deflection Temperature Under Load (1.8 MPa, Unannealed) CLTE - Flow < 149°C > 149°C NOTE	177 4.7E-5 1.4E-4	°C cm/cm/°C	ASTM D648
Deflection Temperature Under Load (1.8 MPa, Unannealed) CLTE - Flow < 149°C > 149°C NOTE 1.	177 4.7E-5 1.4E-4 Break	°C cm/cm/°C	ASTM D648
Deflection Temperature Under Load (1.8 MPa, Unannealed) CLTE - Flow < 149°C > 149°C NOTE 1. 2.	177 4.7E-5 1.4E-4 Break Transverse	°C cm/cm/°C	ASTM D648

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