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) Resistant		
	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	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	108	MPa	
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 $mm^3/N \cdot m$	ASTM G77
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	177	°C	ASTM D648
CLTE - Flow			ASTM E228
< 149°C	4.7E-5	cm/cm/°C	
> 149°C	1.4E-4	cm/cm/°C	
NOTE			
1.	Break		
2.	Transverse		
3.	Axial		
4.	PV + 12600 psi-ft/in		

Recommended distributors for this material

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