UNINAR® 740

Polyvinylidene Fluoride

Nytef Plastics, Ltd.

Message:

UNINAR PVDF (POLYVINYLIDENE FLUORIDE) is a non-reinforced highly crystalline fluoropolymer that combines exceptional chemical resistance with superior strength and stability. When compared with traditional fluoropolymers like PTFE, UNINAR PVDF offers up to three times the typical strength and stiffness while maintaining unparalleled resistance to even the harshest chemicals—even at temperatures up to 300°F. These properties, along with its natural flame retardency (UL94, V-0) and ultrahigh purity have made it the material of choice for processing equipment components used in semiconductor manufacturing clean room environments. Because it also offers excellent toughness and electrical properties that remain stable over a wide range of both frequencies and temperatures, UNINAR PVDF is also often used in components used for power transmission. UNINAR PVDF is offered in two grades; UNINAR 740 (beige) and UNINAR 1010 (white). Both grades machine easily and are available from Nytef Plastics in a full range of heavy gauge rod, plate, and tubular bar sizes.
UNINAR PVDF ATTRIBUTES
300°F continuous use temperature
Excellent balance of strength, toughness and abrasion resistance
Resistant to virtually all chemicals and solvents
Extremely low moisture absorption
Low permeability to gases & liquids
Excellent UV & nuclear radiation resistance
Flame resistant -UL 94 V-0 rated
Easily machined and fabricated
TYPICAL INDUSTRIES
Chemical
Pulp and paper processing
Food processing equipment
Electrical and electronics products
Semiconductor manufacturing
Petroleum processing
APPLICATIONS
Pump components
Manifolds and valves
Fluid sensors
Liquid chromatography components
Analytical instruments
Bearings and bushings

General Information	
Features	Flame Retardant
	Good Abrasion Resistance
	Good Chemical Resistance
	Good Electrical Properties
	Good Stability
	Good Toughness
	Good UV Resistance
	High Purity
	High Stiffness
	High Strength
	Highly Crystalline
	Low Gas Permeability
	Low Moisture Absorption

	Machinable
	Radiation (Gamma) Resistant
	Solvent Resistant
Uses	Bearings
	Bushings
	Electrical/Electronic Applications
	Fluid Handling
	Food Service Applications
	Industrial Applications
	Pump Parts
	Semiconductor Molding Compounds
	Valves/Valve Parts
Appearance	Beige
Forms	Preformed Parts
	Rod

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.78	g/cm³	ASTM D792
Water Absorption			ASTM D570
24 hr	0.010 to 0.030	%	
Saturation	0.030	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	84		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1570	MPa	ASTM D638
Tensile Strength (Yield)	41.4	MPa	ASTM D638
Tensile Elongation (Break)	150	%	ASTM D638
Flexural Modulus	1650	MPa	ASTM D790
Flexural Strength	50.0	MPa	ASTM D790
Coefficient of Friction	0.58		ASTM D1894
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	290	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	116	°C	ASTM D648
Continuous Use Temperature	149	°C	UL 746
Peak Melting Temperature	171	°C	ASTM D3418
CLTE - Flow	1.2E-4	cm/cm/°C	ASTM D696
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257

Dielectric Strength [1]	10 to 11	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	8.20		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (6.10 mm)	V-0		UL 94
NOTE			
1.	Method A (Short-Time)		

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

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