UNIFONE® PSU

Polysulfone

Nytef Plastics, Ltd.

Message:

UNIFONE PSU (Polysulfone) is an amorphous high performance thermoplastic material that has proven performance at elevated temperatures. Good mechanical properties along with thermal stability allow for its use in load bearing applications over broad temperature ranges. Other notable attributes include flame retardance, excellent radiation resistance, and good chemical resistance. The ability of UNIFONE PSU to withstand common sterilization techniques supports its use in numerous sanitary applications such as medical instruments and food processing machinery.
Nytef Plastic's UNIFONE PSU stock shapes are amber in color and semi-transparent. They machine easily and are available in a full range of heavy gauge rod, plate and tubular bar sizes.
PRODUCT ATTRIBUTES
320°F continuous use temperature
Excellent strength and rigidity, even at elevated temperatures
High impact resistance
Low moisture absorption
Chemically resistant to many acids and solvents
Superior electrical properties
Rated UL V-0
Gamma radiation resistance
Easily machined and fabricated
INDUSTRIES
Medical
Pharmaceutical manufacturing
Aircraft and aerospace
Appliance manufacturing
Electrical and electronics manufacturing
Food processing
APPLICATIONS
Manifolds
Electrical insulators, connectors, and components
Aircraft instrumentation
Medical instruments and instrument trays
Sensors and analytical instruments
Microwave cookware

General Information	
Features	Acid Resistant
	Good Chemical Resistance
	Good Sterilizability
	Good Thermal Stability
	High Impact Resistance
	High Rigidity
	High Strength
	Low Moisture Absorption
	Machinable
	Radiation (Gamma) Resistant
	Solvent Resistant
Uses	Aerospace Applications
	Aircraft Applications

	Aircraft Interiors
	Connectors
	Electrical Parts
	Electrical/Electronic Applications
	Food Service Applications
	Medical Devices
	Medical/Healthcare Applications
	Pharmaceuticals
	White Goods & Small Appliances
Agency Ratings	FDA Unspecified Rating
	NSF 61
	USDA 3A
	USDA Unspecified Approval
	USP Class VI 2
Appearance	Clear Amber
Forms	Preformed Parts
	Rod

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.24	g/cm³	ASTM D792
Water Absorption			ASTM D570
24 hr	0.30	%	
Saturation	0.60	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	82		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2480	MPa	ASTM D638
Tensile Strength (Yield)	70.3	MPa	ASTM D638
Tensile Elongation (Break)	30	%	ASTM D638
Flexural Modulus	2690	MPa	ASTM D790
Flexural Strength	106	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	69	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	174	°C	ASTM D648
Continuous Use Temperature	160	°C	Internal Method
Glass Transition Temperature	190	°C	ASTM D3418
Melting Temperature	343 to 399	°C	ASTM D789
CLTE - Flow	5.8E-5	cm/cm/°C	ASTM D696

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+2 to 1.0E+3	ohms	ASTM D257
Volume Resistivity	> 1.0E+16	ohms·cm	ASTM D257
Dielectric Strength [1]	17	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	3.07		
1 MHz	3.03		
Dissipation Factor (60 Hz)	8.0E-4		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (6.10 mm)	HB		UL 94
NOTE			
1.	Method A (Short-Time)		

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

WECHAT