NYTEF PLASTICS

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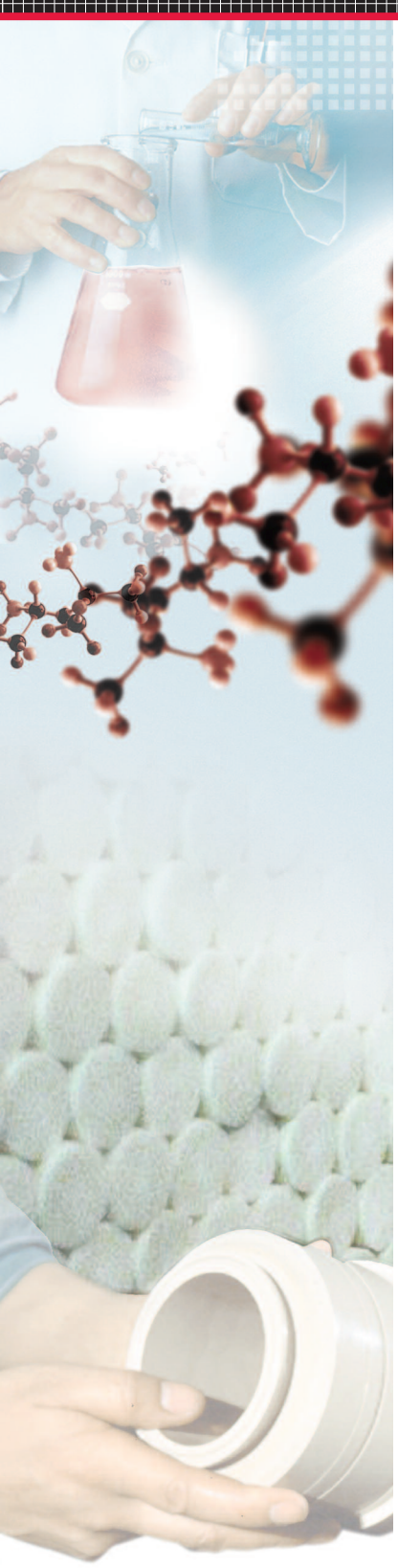

UNIFONE® PSU

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

Nytef Plastics, Ltd. is dedicated to supplying our customers with the highest quality thermoplastic stock shapes for machining. We manufacture and stock a full line of thermoplastic materials in a wide variety of rod, plate and tubular bar sizes. In addition, we offer over 35 years of experience in the custom extrusion of application-specific and proprietary resins to meet even the most demanding performance requirements. Nytef Plastics offers full technical support for all products and is certified to ISO 9002 standards for the manufacture of extruded plastics stock shapes.

UNIFONE® PSU POLYSULFONE

Property	Test Method	Units	UNIFONE® PSU Polysulfone
Mechanical			
Specific Gravity	ASTM-D792	—	1.24
Tensile Strength	ASTM-D638	psi	10,200
Tensile Elongation	ASTM-D638	%	30
Tensile Modulus of Elasticity	ASTM-D638	psi	360,000
Flexural Strength	ASTM-D790	psi	15,400
Flexural Modulus of Elasticity	ASTM-D790	psi	390,000
Izod Notched Impact	ASTM-D256	ft.-lbs./in.	1.3
Rockwell Hardness	ASTM-D785	M scale	M82
Thermal			
Coef. of Linear Thermal Expansion	ASTM-D696	in./in./°F	3.2×10^{-5}
Max. Continuous Use Temp.	Nytef std.	°F	320
Heat Deflection Temp. @ 264 psi	ASTM-D648	°F	345
Glass Transition Temperature	ASTM-D3418	°F	374
Melting Point	ASTM-D789	°F	650-750
Electrical			
Dielectric Strength – Short Term	ASTM-D149	volts/mil	425
Dielectric Constant @ 60 Hz	ASTM-D150		3.07
Dielectric Constant @ 10^6 Hz	ASTM-D150		3.03
Dissipation Factor @ 60 Hz	ASTM-D150		0.0008
Volume Resistivity	ASTM-D257	ohm-cm	$> 10^{16}$
Miscellaneous			
Water Absorption/24 hrs.	ASTM-D570	% weight	0.3
Water Absortion @ saturation	ASTM-D570	% weight	0.6
Flammability	UL 94		HB (0.240")
Color			Amber
Agency Compliance			
FDA/USDA			Yes
3-A Dairy Standards			Yes
NSF Std. 61			Yes
USP Class VI			Available

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