Thermalux® Unfilled

Polysulfone

Westlake Plastics Company

Message:

Made from UDEL® polysulfone resin, these stock shapes remain stable, resisting creep and deformation under continuous load and elevated temperatures. They have high tensile strength and, as temperatures increase, flexural modulus remains high. Thermalux products will withstand exposure to soap, detergent solutions and some hydrocarbon oils, even at elevated temperatures under moderate stress levels.
Applications Include:
Float switches
Membrane cartridge filter system
Solenoid valve body
Dairy connectors
Advantages of Thermalux:
Dimensionally stable
Easily machined
FDA compliant
Transparent grades available
Excellent mechanical and electrical properties
Steam resistant
Low outgassing levels

General Information	
Features	Detergent Resistant
	Food Contact Acceptable
	Good Creep Resistance
	Good Dimensional Stability
	Good Electrical Properties
	High Tensile Strength
	Hydrocarbon Resistant
	Low to No Outgassing
	Machinable
	Oil Resistant
	Steam Resistant
Uses	Connectors
	Membranes
	Switches
	Valves/Valve Parts
Agency Ratings	FDA Food Contact, Unspecified Rating
Appearance	Amber
	Clear/Transparent
	Colors Available
Forms	Film

Rod

Sheet

Slab

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.24	g/cm³	ASTM D792
Water Absorption (24 hr)	0.30	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			
M-Scale	69		ASTM D2240
R-Scale	120		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2480	MPa	ASTM D638
Tensile Strength (Yield)	70.3	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	5.0 to 6.0	%	
Break	50 to 100	%	
Flexural Modulus	2690	MPa	ASTM D790
Flexural Strength (Yield)	106	MPa	ASTM D790
Compressive Strength	95.8	MPa	ASTM D695
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	69	J/m	ASTM D256
Unnotched Izod Impact	No Break		ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	181	°C	
1.8 MPa, Unannealed	174	°C	
CLTE - Flow	5.6E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.26	W/m/K	ASTM C177
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	5.0E+16	ohms·cm	ASTM D257
Dielectric Strength	17	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	3.06		ASTM D150
Dissipation Factor (1 kHz)	1.0E-3		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (4.47 mm)	V-0		UL 94
Oxygen Index	30	%	ASTM D2863
Optical	**Nominal Value**	**Unit**	**Test Method**
Transmittance	75.0	%	ASTM D1746
Haze	5.0	%	ASTM D1746

infringement occurs, please contact us immediately.

Recommended distributors for this material

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