LAPEX A

LATI INDUSTRIA TERMOPLASTICI SPA - *Polyethersulfone*

General Information

Product Description

Product made of Polyethersulphone (PESU). Unfilled. Intrinsically flame retardant. Low smoke density and low toxicity index. Very high dimensional stability. PFAS-free product.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Flame Retardant	• High Heat Resistance	• PFAS Free
Uses	• High Temperature Applications		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.37	g/cm³	ISO 1183
Molding Shrinkage [2]			ISO 294-4
Across Flow : 0.0787 in	0.75 to 0.95	%	
Flow : 0.0787 in	0.70 to 0.90	%	
Water Absorption			ISO 62
Saturation, 73°F [3]	2.2	%	
Saturation, 73°F [4]	0.80	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ISO 527-1/1
73°F	421000	psi	
140°F	392000	psi	
194°F	363000	psi	
248°F	334000	psi	
302°F	290000	psi	
Tensile Stress			ISO 527-2/5
Yield, 73°F	12300	psi	
Yield, 140°F	10900	psi	
Yield, 194°F	10200	psi	
Yield, 248°F	8700	psi	
Yield, 302°F	6530	psi	
Tensile Stress			ISO 527-2/5
Break, 73°F	No Break		
Break, 140°F	No Break		
Break, 194°F	No Break		
Break, 248°F	No Break		
Break, 302°F	No Break		
Tensile Strain			ISO 527-2/5
Yield, 73°F	6.3	%	
Yield, 140°F	5.5	%	
Yield, 194°F	4.8	%	
Yield, 248°F	4.3	%	
Yield, 302°F	3.8	%	
Tensile Strain			ISO 527-2/5
Break, 73°F	> 50	%	
Break, 140°F	> 50	%	

Break, 194°F	> 50	%	
Break, 248°F	> 50	%	
Break, 302°F	> 50	%	
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-4°F	1.2	ft·lb/in²	
73°F	2.9	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-4°F	No Break		
73°F	No Break		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	410	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	383	°F	ISO 75-2/A
Vicat Softening Temperature	419	°F	ISO 306/B120
CLTE - Flow (86 to 212°F)	2.8E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (86 to 212°F)	2.5E-5	in/in/°F	ISO 11359-2
Thermal Conductivity			ASTM E1461
-- [5]	1.4	Btu·in/hr/ft²/°F	
-- [6]	1.4	Btu·in/hr/ft²/°F	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+12	ohms	ASTM D257
Dielectric Strength (73°F, 0.0787 in, Method A (Short-Time))	640	V/mil	ASTM D149
Comparative Tracking Index [7] (Solution A)	125	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.06 in	V-0		
0.12 in	V-0		
Oxygen Index	39	%	ASTM D2863

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 60 MPa

[3] in water

[4] in air

[5] through plane

[6] in plane

[7] without surfactant