

Typical Properties

Thermx CG933 Polyester (all colors except white) 30% Glass-Fiber-Reinforced, Flame-Retardant PCT

Property, ^a Units	ASTM Test Method	CG933 ^{b,c}
Glass-Fiber-Reinforced, %		30
Specific Gravity	D 792	1.63
Tensile Stress @ Break		
MPa	D 638	120
psi		17,400
Elongation @ Break, %	D 638	2.0
Flexural Strength		
MPa	D 790	180
psi		26,100
Flexural Modulus		
MPa	D 790	9,600
10 ⁵ psi		13.9
Izod Impact Strength, Notched		
J/m	D 256	90
ft-lbf/in.		1.7
Impact Strength, Unnotched		
J/m	D 4812	690
ft-lbf/in.		12.9
Deflection Temperature		
@ 1.82 MPa (264 psi)		
°C	D 648	255
°F		491
UL 94 Flammability Classification		94V-0

^aAll tests are run @ 23°C (73°F) and 50% relative humidity.

^bData are based on limited testing.

^cData for all colors except white.

Unless noted otherwise, properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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Thermx CG933 Polyester (all colors except white)
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Properties ^{a,b}	ASTM Method	Units		Typical Value	
		SI	US	SI	US
GENERAL					
Specific Gravity	D 790	—	—	1.63	1.63
Water Absorption, 24 h	D 570	%	%	0.08	0.08
Mold Shrinkage, parallel to flow 1/8" (3.2 mm) thickness	D 955	mm/mm	in./in.	0.001–0.003	0.001–0.003
THERMAL					
Deflection Temperature					
@ 66 psi (0.455 MPa)	D 648	°C	°F	276	529
264 psi (1.820 MPa)		°C	°F	255	491
UL 94 Flammability Classification		—	—	94V-0	94V-0
Oxygen Index	D 2863	%	%	29.5	29.5
Thermal Conductivity @ 304°C (579°F)	E 1269	J/ms°C	Btu·in./h·ft ² ·°F	0.28	1.97
Specific Heat @ 70°C (158°F)	DSC	J/kg°C	Btu/lb·°F	1,405	0.336
300°C (572°F)		J/kg°C	Btu/lb·°F	2,247	0.537
MECHANICAL					
Tensile Strength at Break	D 638	MPa	psi	120	17,000
Elongation at Break	D 638	%	%	2	2
Flexural Modulus	D 790	MPa	psi × 10 ⁵	9,600	14
Flexural Strength	D 790	MPa	psi	180	26,000
Izod Impact Strength					
Notched	D 256	J/m	ft·lbf/in.	90	1.7
Impact Strength, Unnotched	D 4812	J/m	ft·lbf/in.	690	13
ELECTRICAL					
Dielectric Constant @ 1 kHz	D 150	—	—	3.06	3.06
10 kHz		—	—	3.04	3.04
100 kHz		—	—	3.05	3.05
1 MHz		—	—	2.96	2.96
Dissipation Factor @ 1 kHz	D 150	—	—	0.014	0.014
10 kHz		—	—	0.011	0.011
100 kHz		—	—	0.0016	0.0016
1 MHz		—	—	0.0092	0.0092
Volume Resistivity	D 257	ohm·cm	ohm·cm	1.3 × 10 ¹⁵	1.3 × 10 ¹⁵
Surface Resistivity	D 257	ohm/square	ohm/square	1.0 × 10 ¹⁶	1.0 × 10 ¹⁶
Dielectric Strength, short time @ 500 V/s rate-of-rise	D 149	kV/mm	V/mil	518	20.4

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