

Tenite™ Propionate 375E4000012 Clear, Trsp

Cellulose Acetate Propionate

Eastman Chemical Company

Message:

Tenite™ cellulosic plastics are noted for their excellent balance of properties - toughness, hardness, strength, surface gloss, clarity, and a warm feel. The mechanical properties of Tenite™ cellulosic plastics differ with plasticizer levels. Lower plasticizer content yields a harder surface, higher heat resistance, greater rigidity, higher tensile strength, and better dimensional stability. Higher plasticizer content increases impact strength. Tenite™ cellulosic plastics are available in natural, clear, selected ambers or smoke transparents and black translucent. Color concentrates are available in let-down ratios from 10:1 to 40:1. Tenite™ Cellulose Acetate Propionate 375-12 has a plasticizer level of 12%.

General Information			
Additive	Plasticizer (12%)		
Features	Good Strength		
	Good Toughness		
	High Clarity		
	High Gloss		
	High Hardness		
	Plasticized		
	Renewable Resource Content		
Uses	Soft		
	Cosmetic Packaging		
	Personal Care		
	Stationary Supplies		
	Toothbrush Handles		
Appearance	Writing Instruments		
	Amber		
	Black		
	Clear/Transparent		
Forms	Natural Color		
	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792
Molding Shrinkage - Flow	0.20 to 0.60	%	ASTM D955
Water Absorption (23°C, 24 hr)	1.5	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	78		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638

Yield, 23°C	31.7	MPa	
Break, 23°C	33.1	MPa	
Tensile Elongation (Break, 23°C)	45	%	ASTM D638
Flexural Modulus (23°C)	1450	MPa	ASTM D790
Flexural Strength (Yield, 23°C)	41.4	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°C	110	J/m	
23°C	420	J/m	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load ¹			ASTM D648
0.45 MPa, Annealed	83.0	°C	
1.8 MPa, Annealed	75.0	°C	
Vicat Softening Temperature ²	96.0	°C	ASTM D1525
CLTE - Flow (23°C)	2.0E-5	cm/cm/°C	ASTM D696
Specific Heat (23°C)	1260 to 1670	J/kg/°C	DSC
Thermal Conductivity ³ (23°C)	0.25	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength (23°C)	12 to 19	kV/mm	ASTM D149
Dielectric Constant (23°C, 1 MHz)	3.30 to 3.80		ASTM D150
Dissipation Factor (23°C, 1 MHz)	0.010 to 0.15		ASTM D150
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.460 to 1.490		ASTM D542
Transmittance (1520 μm)	> 90.0	%	ASTM D1003
Haze (1520 μm)	< 8.5	%	ASTM D1003
Additional Information	Nominal Value	Unit	Test Method
Soluble Matter Loss (23°C)	0.10	%	ASTM D570
Weight Loss on Heating - 72 hrs (80°C)	0.40	%	ASTM D1562
NOTE			

1.	Conditioned 4 hours at 70°C (158°F)
2.	Conditioned 4 hours at 70°C (158°F)
3.	Range: 0.17 to 0.33

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