Tenite[™] Propionate 381E4000015 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 381-15 contains an ultra-violet inhibitor(UVI) and has a plasticizer level of 15%. It is resistant to high temperatures.

General Information					
Additive	Plasticizer (15%)				
	UV Stabilizer				
Features	Good Strength				
	Good Toughness				
	Good UV Resistance				
	High Clarity				
	High Gloss				
	High Hardness				
	High Heat Resistance				
	Plasticized				
	Renewable Resource Content				
	Soft				
Uses	Eyeglasses				
Appearance	Amber				
	Black				
	Clear/Transparent				
	Natural Color				
Forms	Pellets				
Physical	Nominal Value	Unit	Test Method		
Specific Gravity	1.19	g/cm³	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)	72		ASTM D785		
Mechanical	Nominal Value	Unit	Test Method		
Tensile Strength			ASTM D638		
Yield, 23°C	26.9	MPa			

Break, 23°C	31.0	MPa	
Tensile Elongation (Break, 23°C)	35	%	ASTM D638
Flexural Modulus (23°C)	1340	MPa	ASTM D790
Flexural Strength (Yield, 23°C)	35.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°C	96	J/m	
23°C	440	J/m	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load ¹			ASTM D648
0.45 MPa, Annealed	80.0	°C	
1.8 MPa, Annealed	71.0	°C	
Vicat Softening Temperature ²	92.0	°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)	0.70	%	ASTM D1562
NOTE			
1.	Conditioned 4 hours at 70°C (158°F)		
	Conditioned 4 hours at 70°C		
2.	(158°F)		

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