

Tenite™ Propionate 383A2R30012 Natural, 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 383-12 contains a mold release and has a plasticizer level of 12%. It is resistant to high temperatures.

General Information			
Additive	Mold Release		
	Plasticizer (12%)		
Features	Good Mold Release		
	Good Strength		
	Good Toughness		
	High Clarity		
	High Gloss		
	High Hardness		
	High Heat Resistance		
	Plasticized		
	Renewable Resource Content		
	Soft		
Uses	Personal Care		
	Sporting Goods		
	Toothbrush Handles		
	Toys		
Appearance	Amber		
	Black		
	Clear/Transparent		
	Natural Color		
Forms	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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