

# Tenite™ Butyrate 550E2R30010 Natural, Trsp

Cellulose Acetate Butyrate  
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 transluents. Color concentrates are available in let-down ratios from 10:1 to 40:1. Tenite™ Cellulose Acetate Butyrate 550-10 contains an odor mask and has a plasticizer level of 10%. It meets FDA requirements when supplied in FDA color numbers.

General Information			
Additive	Plasticizer (10%)		
Features	Food Contact Acceptable		
	Good Strength		
	Good Toughness		
	High Clarity		
	High Gloss		
	High Hardness		
	Low to No Odor		
	Plasticized		
	Renewable Resource Content		
	Soft		
Uses	Profiles		
Agency Ratings	FDA Unspecified Rating		
Appearance	Amber		
	Black		
	Clear/Transparent		
	Natural Color		
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage - Flow	0.20 to 0.60	%	ASTM D955
Water Absorption (23°C, 24 hr)	1.4	%	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	33.1	MPa	
Break, 23°C	43.4	MPa	

Tensile Elongation (Break, 23°C)	50	%	ASTM D638
Flexural Modulus (23°C)	1380	MPa	ASTM D790
Flexural Strength (Yield, 23°C)	45.5	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°C	96	J/m	
23°C	240	J/m	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load <sup>1</sup>			ASTM D648
0.45 MPa, Annealed	85.0	°C	
1.8 MPa, Annealed	74.0	°C	
Vicat Softening Temperature <sup>2</sup>	104	°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 <sup>3</sup> (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)	0.50	%	ASTM D707
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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