

# Technical Data Sheet

## Tenite™ Propionate 360A4861307 Clear Trsp

### Applications

- Auto plastics
- Commercial housewares
- Consumer electronics
- Consumer housewares-nfc
- Ophthalmics
- Packaging components non food contact
- Process additives
- Profiles

### Key Attributes

- Chemical resistance to most medical solvents including lipids and IPA
- Ease of processing
- Gamma and E-beam color stability

### Product Description

Tenite™ Propionate 360A4861307 has been tested for FDA/ISO 10993 and USP Class VI Biological Evaluation testing after Gamma and EtO sterilization. Tenite™ Propionate 360A4861307 is a plasticized cellulosic resin. It has exceptional chemical resistance and high flow characteristics.

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™ Cellulosic Acetate Propionate 360-7 has a plasticizer level of 7%.

### Typical Properties

Property <sup>a</sup>	Test Method <sup>b</sup>	Typical Value, Units <sup>c</sup>
<b>General</b>		
Plasticizer		7 %
Specific Gravity	D 792	1.21
<b>Mechanical Properties</b>		
Tensile Stress @ Yield	D 638	41.4 MPa (6000 psi)
Tensile Stress @ Break	D 638	40.7 MPa (5900 psi)
Elongation @ Break	D 638	50 %
Flexural Modulus	D 790	1862 MPa (2.70 x 10 <sup>5</sup> psi)
Flexural Yield Strength	D 790	55.8 MPa (8100 psi)
Rockwell Hardness, R Scale	D 785	95
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	203 J/m (3.8 ft·lbf/in.)
@ -40°C (-40°F)	D 256	85 J/m (1.6 ft·lbf/in.)
<b>Miscellaneous Propionate Properties</b>		
Refractive Index, n <sub>D</sub>	D 542	1.46-1.49
Light Transmission <sup>e</sup>	E 308	>90 %
Haze <sup>e</sup>	D 1003	<8.5 %
Specific Heat		
@ 23°C (73°F)	DSC	1.26-1.67 kJ/kg·K (0.301-0.399 Btu/lb·°F)
Thermal Conductivity	C 177	0.17-0.33 W/m·K (1.2-2.3

		Btu·in./h·ft <sup>2</sup> ·°F)
Coefficient of Linear Thermal Expansion	D 696	11-17 x 10 <sup>-5</sup> /°C (mm/mm·°C) (6-9 x 10 <sup>-5</sup> /°F (in./in.·°F))
Mold Shrinkage	D 955	0.2-0.6 %
Dielectric Strength	D 149	11.8-18.7 kV/mm (300-475 V/mil)
Dielectric Constant		
1 MHz	D 150	3.3-3.8
Dissipation Factor		
1 MHz	D 150	0.01-0.15
Volume Resistivity	D 257	10 <sup>13</sup> -10 <sup>15</sup> ohm·cm
<b>Permanence Properties</b>		
Water Absorption, 24 h immersion	D 570	1.7 %
Soluble Matter Loss	D 570	0.1 %
Weight Loss on Heating		
[72 hours @ 80°C (176°F)]	D 1562	0.3 %
<b>Thermal Properties</b>		
Deflection Temperature <sup>d</sup>		
@ 0.455 MPa (66 psi)	D 648	92 °C (198 °F)
@ 1.82 MPa (264 psi)	D 648	82 °C (180 °F)
Vicat Softening Temperature <sup>d</sup>	D 1525	107 °C (225 °F)

<sup>a</sup>Unless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.

<sup>b</sup>Unless noted otherwise, the test method is ASTM.

<sup>c</sup>Units are in SI or US customary units.

<sup>d</sup>Conditioned 4 hours @ 70°C (158°F)

<sup>e</sup>1.52-mm (0.06-in.) thickness

## Characteristics

Formula 360 - base; Complies with FDA food contact regulations when supplied in FDA color numbers.

## Comments

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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