



# Technical Data Sheet Tenite™ Propionate 380A4000018 Clear Trsp

## **Applications**

- Commercial housewares
- Consumer housewares-nfc
- Graphic arts
- · Industrial machine guards
- Ophthalmics
- Profiles
- · Safety glasses/shield
- · Sporting equipment

#### **Product Description**

Tenite<sup>™</sup> cellulosic plastics are noted for their excellent balance of properties – toughness, hardness, strength, surface gloss, clarity and warm feel. The mechanical properties of Tenite<sup>™</sup> 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<sup>™</sup> 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<sup>™</sup> Cellulose Acetate Propionate 380-18 has a plasticizer level of 18%. It is resistant to high processing temperatures.

### **Typical Properties**

<b>Property</b> <sup>a</sup>	Test Method <sup>b</sup>	Typical Value, Units <sup>C</sup>	
General			
Plasticizer		18 %	
Specific Gravity	D 792	1.19	
Mechanical Properties			
Tensile Stress @ Yield	D 638	22.1 MPa (3200 psi)	
Tensile Stress @ Break	D 638	27.6 MPa (4000 psi)	
Elongation @ Break	D 638	35 %	
Flexural Modulus	D 790	1172 MPa $(1.70 \times 10^5 \text{ psi})$	
Flexural Yield Strength	D 790	29.0 MPa (4200 psi)	
Rockwell Hardness, R Scale	D 785	55	
Izod Impact Strength, Notched			
@ 23°C (73°F)	D 256	523 J/m (9.8 ft·lbf/in.)	
@ -40°C (-40°F)	D 256	107 J/m (2.0 ft·lbf/in.)	
Miscellaneous Propionate Properties			
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 %	
Mold Shrinkage	D 955	0.2-0.6 %	
Permanence Properties			
Water Absorption, 24 h immersion	D 570	1.4 %	
Soluble Matter Loss	D 570	0.1 %	
Weight Loss on Heating			
[72 hours @ 80°C (176°F)]	D 1562	1.0 %	
Thermal Properties			
Deflection Temperature <sup>d</sup>			

@ 1.82 MPa (264 psi)	D 648	67 °C (153 °F)
Vicat Softening Temperature <sup>d</sup>	D 1525	87 °C (189 °F)

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

#### Comments

Properties reported here are based on limited testing. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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

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

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

e1.52-mm (0.06-in.) thickness