

Technical Data Sheet

Tenite™ Propionate 307A4000015 Clear Trsp

Applications

- Compounders
- Consumer housewares-nfc
- Graphic arts
- Indoor signs
- Ophthalmics
- Profiles
- Safety glasses/shield
- Small appliances non-food contact
- Sporting equipment
- Tools

Product Description

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 307-15 has a plasticizer level of 15%.

Typical Properties

Property ^a	Test Method ^b	Typical Value, Units ^c
General		
Plasticizer		15 %
Specific Gravity	D 792	1.19
Mechanical Properties		
Tensile Stress @ Yield	D 638	26.9 MPa (3900 psi)
Tensile Stress @ Break	D 638	31.0 MPa (4500 psi)
Elongation @ Break	D 638	35 %
Flexural Modulus	D 790	1344 MPa (1.95 x 10 ⁵ psi)
Flexural Yield Strength	D 790	35.2 MPa (5100 psi)
Rockwell Hardness, R Scale	D 785	72
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	443 J/m (8.3 ft·lbf/in.)
@ -40°C (-40°F)	D 256	96 J/m (1.8 ft·lbf/in.)
Miscellaneous Propionate Properties		
Refractive Index, n _D	D 542	1.46-1.49
Light Transmission ^e	E 308	>90 %
Haze ^e	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 ² ·°F)
Coefficient of Linear Thermal Expansion	D 696	11-17 x 10 ⁻⁵ /°C (mm/mm·°C) (6-9 x 10 ⁻⁵ /°F (in./in.·°F))
		0.2-0.6 %

Mold Shrinkage	D 955	
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^{13} - 10^{15} ohm·cm
Permanence Properties		
Water Absorption, 24 h immersion	D 570	1.5 %
Soluble Matter Loss	D 570	0.1 %
Weight Loss on Heating		
[72 hours @ 80°C (176°F)]	D 1562	0.7 %
Thermal Properties		
Deflection Temperature ^d		
@ 0.455 MPa (66 psi)	D 648	80 °C (176 °F)
@ 1.82 MPa (264 psi)	D 648	71 °C (160 °F)
Vicat Softening Temperature ^d	D 1525	92 °C (198 °F)

^aUnless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.

^bUnless noted otherwise, the test method is ASTM.

^cUnits are in SI or US customary units.

^dConditioned 4 hours @ 70°C (158°F)

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

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.

Characteristics

Formula 307 - UVI

Eastman and its marketing affiliates shall not be responsible for the use of this information, or of any product, method, or apparatus mentioned, and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and for the health and safety of your employees and purchasers of your products. No warranty is made of the merchantability or fitness of any product, and nothing herein waives any of the Seller's conditions of sale.

3/13/2018 9:24:04 AM