

Technical Data Sheet

Tenite™ Butyrate 264E4861310 Clear Trsp

Applications

- Compounders
- Equipment & machinery
- Outdoor signs
- Sporting equipment

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™ Cellulose Acetate Butyrate 264-10 has a plasticizer level of 10%. It meets FDA requirements for certain food-contact applications when supplied in specific FDA color numbers.

Typical Properties

Property ^a	Test Method ^b	Typical Value, Units ^c
General		
Plasticizer		10 %
Specific Gravity	D 792	1.19
Mechanical Properties		
Tensile Stress @ Yield	D 638	33.1 MPa (4800 psi)
Tensile Stress @ Break	D 638	43.4 MPa (6300 psi)
Elongation @ Break	D 638	50 %
Flexural Modulus	D 790	1379 MPa (2.00 x 10 ⁵ psi)
Flexural Yield Strength	D 790	45.5 MPa (6600 psi)
Rockwell Hardness, R Scale	D 785	78
Izod Impact Strength, Notched		
@ 23°C (73°F)	D 256	240 J/m (4.5 ft·lbf/in.)
@ -40°C (-40°F)	D 256	96 J/m (1.8 ft·lbf/in.)
Miscellaneous Butyrate 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))
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^{13} - 10^{15} ohm·cm
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 707	0.5 %
Thermal Properties		
Deflection Temperature ^d		
@ 0.455 MPa (66 psi)	D 648	85 °C (185 °F)
@ 1.82 MPa (264 psi)	D 648	74 °C (165 °F)
Vicat Softening Temperature ^d	D 1525	104 °C (219 °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.) specimen thickness

Characteristics

Formula 264 - 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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