EASTMAN

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™ cellulosic plastics are noted for their excellent balance of properties – toughness, hardness, strength, surface gloss, clarity and 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 Propionate 380-18 has a plasticizer level of 18%. It is resistant to high processing temperatures.

Typical Properties

Property[a]	Test Method[b]	Typical Value, Units[c]
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 x 10^5 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_D	D 542	1.46-1.49
Light Transmission[e]	E 308	>90 %
Haze[e]	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[d]		
@ 0.455 MPa (66 psi)	D 648	77 °C (171 °F)

@ 1.82 MPa (264 psi)	D 648	67 °C (153 °F)
Vicat Softening Temperature[d]	D 1525	87 °C (189 °F)

[a]*Unless noted otherwise, all tests are run at 23°C (73°F) and 50% relative humidity.*
[b]*Unless noted otherwise, the test method is ASTM.*
[c]*Units are in SI or US customary units.*
[d]*Conditioned 4 hours @ 70°C (158°F)*
[e]*1.52-mm (0.06-in.) thickness*

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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