

Tenite™ cellulosics

Formulas 360, 371, 375, 376, 377

Plastics made from wood pulp—
a renewable resource

Selector chart

Tenite™ cellulose

Formulas 360, 371, 375, 376, 377

Property ^a	Unit	ASTM method					
Plasticizer	%	—	7	9	12	16	
Flow designation		D569	H4	H3	H2	H	
Flow temperature	°C	D569	170	165	160	155	
	°F		338	329	320	311	
Specific gravity		D792	1.21	1.21	1.20	1.19	
Mechanical							
Tensile stress @ yield 50 mm/min (2 in./min)	MPa	D638	41.4	36.5	31.7	26.9	
	psi		6,000	5,300	4,600	3,900	
Tensile stress @ break 50 mm/min (2 in./min)	MPa	D638	40.7	37.2	33.1	30.3	
	psi		5,900	5,400	4,800	4,400	
Elongation @ break 50 mm/min (2 in./min)	%	D638	50	45	45	45	
Flexural modulus 1.27 mm/min (0.05 in./min)	MPa	D790	1,862	1,655	1,448	1,241	
	105 psi		2.70	2.40	2.10	1.80	
Flexural yield strength 1.27 mm/min (0.05 in./min)	MPa	D790	55.8	48.3	41.4	35.2	
	psi		8,100	7,000	6,000	5,100	
Rockwell hardness	R Scale	D785	95	88	78	68	
Izod impact strength, notched	23°C	D256	J/m	203	224	416	>533
	73°F		ft•lbf/in.	3.8	4.2	7.8	>10
	−40°C		J/m	85	96	107	123
	−40°F		ft•lbf/in.	1.6	1.8	2.0	2.3
Thermal							
Deflection temperature (Conditioned 4h @ 70°C [158°F])	1.82 MPa	D648	°C	82	78	75	72
	264 psi		°F	180	172	167	162
	0.455 MPa		°C	92	88	83	80
	66 psi		°F	198	190	181	176
Vicat softening temperature (Conditioned 4h @ 70°C [158°F])	°C	D1525	107	102	96	92	
	°F		225	216	205	198	
Permanence							
Water absorption (24h immersion)	%	D570	1.7	1.6	1.5	1.4	
Soluble matter loss	%		0.1	0.1	0.1	0.1	
Weight loss on heating (72h @ 80°C [176°F])	%	D1562	0.3	0.4	0.4	1.3	

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

Formula 360—base; FDA¹

Formula 376—UVI; standard inventory²

Formula 371—FDA¹; mold release

Formula 377—FDA¹; standard inventory²

Formula 375—standard inventory²

¹Meets FDA requirements when supplied in FDA color numbers

²Available in 12% plasticizer only

Miscellaneous propionate properties	
Refractive index (ASTM D542)	1.46–1.49
Light transmission (1.52-mm [0.06-in.] thickness) (ASTM E308)	>90%
UV light screening (>99% absorbed) (ASTM E308)	Formulations available on request
Haze (1.52-mm [0.06-in.] thickness) (ASTM D1003)	<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 (ASTM C177)	0.17–0.33 W/m•K (1.2–2.3 Btu•in./h•ft ² •°F)
Coefficient of linear thermal expansion (ASTM D696)	11–17 × 10 ⁻⁵ mm/mm•°C (6–9 × 10 ⁻⁵ in./in.°F)
Mold shrinkage (ASTM D955)	0.2%–0.6%
Dielectric strength (ASTM D149)	11.8–18.7 kV/mm (300–475 V/mil)
Dielectric constant @ 1 MHz (ASTM D150)	3.3–3.8
Dissipation factor @ 1 MHz (ASTM D150)	0.01–0.15
Volume resistivity (ASTM D257)	10 ¹³ –10 ¹⁵ ohm•cm

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.

Conversions of metric/U.S. customary values may have been rounded off and therefore may not be exact conversions.



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