

Selector chart

Tenite™ cellulose acetate butyrate

Formulas 264, 285, 485, 530, 550, 565, 575, 576

Property ^a	Unit	ASTM method									
Plasticizer	%	—	3	5	8	10	13	16	20	23	
Flow designation		D569	H3	H2	H	MH	M	MS	S	S2	
Flow temperature	°C	D569	165	160	155	150	145	140	135	130	
	°F		329	120	311	302	293	284	275	266	
Specific gravity		D792	1.21	1.20	1.20	1.19	1.18	1.17	1.17	1.16	
Mechanical											
Tensile stress @ yield 50 mm/min (2 in./min)	MPa	D638	45.5	40.7	37.2	33.1	29.0	25.5	21.4	17.2	
	psi		6,600	5,900	5,400	4,800	4,200	3,700	3,100	2,500	
Tensile stress @ break 50 mm/min (2 in./min)	MPa	D638	53.8	51.0	47.6	43.4	39.3	33.8	27.6	20.0	
	psi		7,800	7,400	6,900	6,300	5,700	4,900	4,000	2,900	
Elongation @ break 50 mm/min (2 in./min)	%	D638	55	55	50	50	50	50	50	50	
Flexural modulus 1.27 mm/min (0.05 in./min)	MPa	D790	1,862	1,724	1,586	1,379	1,241	1,103	965	827	
	10 ⁵ psi		2.70	2.50	2.30	2.00	1.80	1.60	1.40	1.20	
Flexural yield strength 1.27 mm/min (0.05 in./min)	MPa	D790	63.4	57.2	51.0	45.5	39.3	33.1	27.6	21.4	
	psi		9,200	8,300	7,400	6,600	5,700	4,800	4,000	3,100	
Rockwell hardness	R scale	D785	102	94	88	78	59	40	12	—	
Izod impact strength, notched	23°C	D256	139	165	198	240	283	331	384	448	
	73°F		ft•lbf/in.	2.6	3.1	3.7	4.5	5.3	6.2	7.2	8.4
	-40°C		J/m	80	85	91	96	101	107	112	123
	-40°F		ft•lbf/in.	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.3
Thermal											
Deflection temperature (Conditioned 4 hr @ 70°C [158°F])	1.82 MPa	D648	86	83	79	74	69	64	58	52	
	264 psi		°F	187	181	174	165	156	147	136	126
	0.455 MPa		°C	96	93	89	85	81	77	72	68
	66 psi		°F	205	199	192	185	178	171	162	154
Vicat softening temperature (Conditioned 4 hr @ 70°C [158°F])	°C	D1525	121	115	109	104	100	96	92	88	
	°F		250	239	228	219	212	205	198	190	
Permanence											
Water absorption (24 hr immersion)	%	D570	1.8	1.6	1.5	1.4	1.4	1.3	1.2	1.2	
Soluble matter loss	%		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Weight loss on heating (72 hr @ 80°C [176°F])	%	D707	0.15	0.25	0.3	0.5	0.6	0.8	1.0	1.2	

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

Formula 264—base

Formulas 285, 530, 550, 565—odor mask

Formula 485—odor mask; UVI

Formula 575—odor mask; standard inventory;

available in 10% plasticizer only

Formula 576—odor mask; UVI; standard inventory;

available in 10% plasticizer only

**Plastics made from wood pulp—
a renewable resource**

Miscellaneous butyrate 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 x 10 ⁻⁵ mm/mm•°C (6–9 x 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.



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