

Selector chart

Tenite™ cellulose acetate propionate Formulas 307, 358

Property ^a	Unit	ASTM method						
Plasticizer	%	—	8	10	13	15	18	
Flow designation		D569	H4	H3	H2	H	MH	
Flow temperature	°C	D569	170	165	160	155	150	
	°F		338	329	320	311	302	
Specific gravity		D792	1.21	1.20	1.20	1.19	1.19	
Mechanical								
Tensile stress @ yield 50 mm/min (2 in./min)	MPa	D638	40.7	37.2	31.7	26.9	22.1	
	psi		5,900	5,400	4,600	3,900	3,200	
Tensile stress @ break 50 mm/min (2 in./min)	MPa	D638	42.7	37.9	33.1	31.0	27.6	
	psi		6,200	5,500	4,800	4,500	4,000	
Elongation @ break 50 mm/min (2 in./min)	%	D638	50	45	40	35	35	
Flexural modulus 1.27 mm/min (0.05 in./min)	MPa	D790	1,862	1,724	1,551	1,344	1,172	
	10 ⁵ psi		2.70	2.50	2.25	1.95	1.70	
Flexural yield strength 1.27 mm/min (0.05 in./min)	MPa	D790	55.8	48.3	41.4	35.2	29.0	
	psi		8,100	7,000	6,000	5,100	4,200	
Rockwell hardness	R scale	D785	98	94	84	72	55	
Izod impact strength, notched	23°C	J/m	D256	246	304	363	443	523
	73°F	ft•lbf/in.		4.6	5.7	6.8	8.3	9.8
	-40°C	J/m		69	75	85	96	107
	-40°F	ft•lbf/in.		1.3	1.4	1.6	1.8	2.0
Thermal								
Deflection temperature (Conditioned 4 hr @ 70°C [158°F])	1.82 MPa	°C	D648	84	80	76	71	67
	264 psi	°F		183	176	169	160	153
	0.455 MPa	°C		93	88	84	80	77
	66 psi	°F		199	190	183	176	171
Vicat softening temperature (Conditioned 4 hr @ 70°C [158°F])	°C	D1525	107	102	96	92	87	
	°F		225	216	205	198	189	
Permanence								
Water absorption (24 hr immersion)	%	D570	1.8	1.7	1.6	1.5	1.4	
Soluble matter loss	%		0.1	0.1	0.1	0.1	0.1	
Weight loss on heating (72 hr @ 80°C [176°F])	%	D1562	0.2	0.3	0.4	0.7	1.0	

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

Formula 307—UVI

Formulas 358—base

**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.



Eastman Corporate Headquarters
P.O. Box 431
Kingsport, TN 37662-5280 U.S.A.

U.S.A. and Canada, 800-EASTMAN (800-327-8626)
Other Locations, +(1) 423-229-2000

www.eastman.com/locations

Although the information and recommendations set forth herein are presented in good faith, Eastman Chemical Company ("Eastman") and its subsidiaries make no representations or warranties as to the completeness or accuracy thereof. 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. Nothing contained herein is to be construed as a recommendation to use any product, process, equipment, or formulation in conflict with any patent, and we make no representations or warranties, express or implied, that the use thereof will not infringe any patent. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS AND NOTHING HEREIN WAIVES ANY OF THE SELLER'S CONDITIONS OF SALE.

Safety Data Sheets providing safety precautions that should be observed when handling and storing our products are available online or by request. You should obtain and review available material safety information before handling our products. If any materials mentioned are not our products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed.

© 2020 Eastman. Eastman brands referenced herein are trademarks of Eastman or one of its subsidiaries or are being used under license. The ® symbol denotes registered trademark status in the U.S.; marks may also be registered internationally. Non-Eastman brands referenced herein are trademarks of their respective owners.