

General Information

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 translucents. Color concentrates are available in let-down ratios from 10:1 to 40:1. Tenite Cellulose Acetate Butyrate 485-23 contains an odor mask and an ultra-violet inhibitor(UVI). It has a plasticizer level of 23%.

General

Material Status	<ul style="list-style-type: none"> Commercial: Active 	
Availability	<ul style="list-style-type: none"> Africa Asia Australia Europe Latin America 	<ul style="list-style-type: none"> Middle East North America Pacific Rim South America
Test Standards Available	<ul style="list-style-type: none"> ASTM 	
Additive	<ul style="list-style-type: none"> Plasticizer, 23 % UV Stabilizer 	
Features	<ul style="list-style-type: none"> Gloss, High Strength, Good Toughness, Good 	
Uses	<ul style="list-style-type: none"> Appliances Cosmetics 	
Appearance	<ul style="list-style-type: none"> Amber Black 	<ul style="list-style-type: none"> Clear Natural Color
Forms	<ul style="list-style-type: none"> Pellets 	

ASTM and ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density -Specific Gravity	1.16	sp gr 23/23°C	ASTM D792
Mold Shrink, Linear-Flow	0.0020 to 0.0060	in/in	ASTM D955
Water Absorption @ 24 hrs	1.2	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength @ Yield	2490	psi	ASTM D638
Tensile Strength @ Break	2900	psi	ASTM D638
Tensile Elongation @ Brk	50	%	ASTM D638
Flexural Modulus	120000	psi	ASTM D790
Flexural Strength @ Yield	3100	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (-40 °F) (73 °F)	2.30	ft-lb/in	ASTM D256
	8.39	ft-lb/in	
Thermal	Nominal Value	Unit	Test Method
DTUL @66psi - Unannealed	154	°F	ASTM D648
DTUL @264psi - Unannealed	126	°F	ASTM D648
Vicat Softening Point	190	°F	ASTM D1525
CLTE, Flow	0.000078	in/in/°F	ASTM D696
Specific Heat (73 °F)	0.350	Btu/lb/°F	ASTM C351
Thermal Conductivity	1.7	Btu-in/hr/ft²/°F	ASTM C177

Electrical	Nominal Value Unit	Test Method
Volume Resistivity	1.0E+15 ohm-cm	ASTM D257
Dielectric Strength	387 V/mil	ASTM D149
Dielectric Constant (1E+6 Hz)	3.550	ASTM D150
Dissipation Factor (1E+6 Hz)	0.080	ASTM D150
Optical	Nominal Value Unit	Test Method
Refractive Index	1.475	ASTM D542
Transmittance	> 90.0 %	ASTM D1003
Haze	< 8.5 %	ASTM D1003

Additional Properties

The value listed as Transmittance, ASTM D1003, was tested in accordance with ASTM E308.

CLTE, ASTM D696: 11e-5 to 17e-5 mm/mm/°C

Dielectric Constant, ASTM D150, 1MHz: 3.3 to 3.8

Dielectric Strength, ASTM D149: 11.8 to 18.7 kV/mm

Dissipation Factor, ASTM D150, 1MHz: 0.01 to 0.15

Refractive Index, ASTM D542: 1.46 to 1.49

Soluble Matter Loss, ASTM D570: 0.1%

Thermal Conductivity, ASTM C177: 0.17 to 0.33 W/m/K

Volume Resistivity, ASTM D257: 1e13 to 1e15 ohm-cm

Weight Loss on Heating, ASTM D1562, 72 hr, 80°C: 1.2%

Specific Heat, 23°C: 1.26 to 1.67 kJ/kg/K

Notes

¹ Typical properties: these are not to be construed as specifications.

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