

Tenite™ Acetate 105E2R30025 Natural, Trsp

Cellulose Acetate
Eastman Chemical Company

Message:

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, amber, and black. Color concentrates are available in let-down ratios from 10:1 to 40:1. Tenite™ Cellulose Acetate 105-25 is heat stabilized and has a plasticizer level of 25%.

General Information			
Additive	Heat Stabilizer		
	Plasticizer (25%)		
Features	Good Strength		
	Good Toughness		
	Heat Stabilized		
	High Gloss		
	High Hardness		
	Renewable Resource Content		
Uses	Cosmetics		
	Eyeglasses		
	Handles		
	Sporting Goods		
	Toys		
Appearance	Amber		
	Black		
	Clear/Transparent		
	Natural Color		
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.28	g/cm ³	ASTM D792
Molding Shrinkage - Flow	0.20 to 0.60	%	ASTM D955
Water Absorption (23°C, 24 hr)	2.3	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C)	90		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638

Yield, 23°C	37.2	MPa	
Break, 23°C	40.7	MPa	
Tensile Elongation (Break, 23°C)	25	%	ASTM D638
Flexural Modulus (23°C)	2340	MPa	ASTM D790
Flexural Strength (Yield, 23°C)	62.7	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°C	48	J/m	
23°C	160	J/m	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load ¹			ASTM D648
0.45 MPa, Annealed	86.0	°C	
1.8 MPa, Annealed	77.0	°C	
Vicat Softening Temperature ²	113	°C	ASTM D1525
CLTE - Flow (23°C)	2.0E-5	cm/cm/°C	ASTM D696
Specific Heat (23°C)	1260 to 1670	J/kg/°C	DSC
Thermal Conductivity ³ (23°C)	0.25	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength (23°C)	12 to 19	kV/mm	ASTM D149
Dielectric Constant (23°C, 1 MHz)	3.30 to 3.80		ASTM D150
Dissipation Factor (23°C, 1 MHz)	0.010 to 0.15		ASTM D150
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.460 to 1.490		ASTM D542
Transmittance (1520 μm)	> 90.0	%	ASTM D1003
Haze (1520 μm)	< 8.5	%	ASTM D1003
Additional Information	Nominal Value	Unit	Test Method
Soluble Matter Loss (23°C)	0.20	%	ASTM D570
Weight Loss on Heating - 72 hrs (80°C)	1.2	%	ASTM D706
NOTE			

1. Conditioned 4 hours at 70°C (158°F)

2. Conditioned 4 hours at 70°C (158°F)

3. Range: 0.17 to 0.33

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

