

# Tenite™ Propionate 371A2R30009 Natural, Trsp

Cellulose Acetate Propionate

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, selected ambers or smoke transparents and black translucent. Color concentrates are available in let-down ratios from 10:1 to 40:1. Tenite™ Cellulose Acetate Propionate 371-09 contains a mold release and has a plasticizer level of 9%. It meets FDA requirements when supplied with FDA numbers.

General Information			
Additive	Mold Release		
	Plasticizer (9%)		
Features	Good Mold Release		
	Good Strength		
	Good Toughness		
	High Clarity		
	High Gloss		
	High Hardness		
	Plasticized		
	Renewable Resource Content		
Uses	Soft		
	Cosmetic Packaging		
	Eyeglasses		
	Medical/Healthcare Applications		
	Personal Care		
	Stationary Supplies		
	Toothbrush Handles		
Agency Ratings	Writing Instruments		
	FDA Unspecified Rating		
Appearance	Amber		
	Black		
	Clear/Transparent		
	Natural Color		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method

Specific Gravity	1.21	g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage - Flow	0.20 to 0.60	%	ASTM D955
Water Absorption (23°C, 24 hr)	1.6	%	ASTM D570
<b>Hardness</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Rockwell Hardness (R-Scale, 23°C)	88		ASTM D785
<b>Mechanical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Strength			ASTM D638
Yield, 23°C	36.5	MPa	
Break, 23°C	37.2	MPa	
Tensile Elongation (Break, 23°C)	45	%	ASTM D638
Flexural Modulus (23°C)	1660	MPa	ASTM D790
Flexural Strength (Yield, 23°C)	48.3	MPa	ASTM D790
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Notched Izod Impact			ASTM D256
-40°C	96	J/m	
23°C	220	J/m	
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load <sup>1</sup>			ASTM D648
0.45 MPa, Annealed	88.0	°C	
1.8 MPa, Annealed	78.0	°C	
Vicat Softening Temperature <sup>2</sup>	102	°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 <sup>3</sup> (23°C)	0.25	W/m/K	ASTM C177
<b>Electrical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
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
<b>Optical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Refractive Index	1.460 to 1.490		ASTM D542
Transmittance (1520 μm)	> 90.0	%	ASTM D1003
Haze (1520 μm)	< 8.5	%	ASTM D1003
<b>Additional Information</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Soluble Matter Loss (23°C)	0.10	%	ASTM D570
Weight Loss on Heating - 72 hrs (80°C)	0.40	%	ASTM D1562
<b>NOTE</b>			
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

