

Eastman Eastman AP005 Copolyester

Category : Polymer , Thermoplastic , Polyester, TP

Material Notes:

Applications:Automotive componentsBreathable filmsElectrical/electronic componentsFilm ModificationFlexible hingesHose mandrellIndustrial componentsIndustrial hoses/beltsOffice furniturePackagingPolymer modificationProfilesRubber and plastic modificationSporting goodsThermoplastic elastomer compoundsTubing**Key Attributes:**Environmentally preferred, non-halogenated materialExcellent chemical and oil resistanceExcellent compatibility with a wide range of polymersExcellent processabilityExceptional heat resistance and high temperature dimensional stabilityHigh energy absorptionHigh flexibility without plasticizersMelt bondable to a variety of substrates, including PVCOutstanding toughness and puncture resistanceSolvent bondable**Product Description:** Eastman AP005 is a tough, clear, durable copolyester ether that combines the strength of plastics, the flexibility of elastomers, and the processability of thermoplastics. Eastman AP005 can be used in injection molding and film or tubing extrusion applications or in any application that demands strength, durability, chemical resistance, and puncture resistance in harsh environments. This copolyester combines toughness, clarity, high temperature resistance and flexibility without the addition of plasticizers. Eastman AP005 is considered environmentally preferred because of its non-halogenated material composition. Its broad compatibility with other polymers such as styrenic block copolymers makes it an excellent choice for both alloys and as additives/modifiers to improve performance properties.Information provided by Eastman.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Eastman-Eastman-AP005-Copolyester.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.13 g/cc	1.13 g/cc	ASTM D792
Water Absorption	0.35 % @Time 86400 sec	0.35 % @Time 24.0 hour	Immersion; ASTM D570
Water Vapor Transmission	132 g/m ² /day	8.50 g/100 in ² /day	ASTM F372
Oxygen Transmission Rate	841 cc/m ² /day @Pressure 0.101 MPa, Temperature 30.0 °C	54.2 cc/100 in ² /day @Pressure 14.7 psi, Temperature 86.0 °F	ASTM D1434
Viscosity Measurement	1.05	1.05	Inherent; EMN-A-AC-G-V-1
Thickness	130 microns	5.12 mil	
Melt Flow	20 g/10 min @Load 2.16 kg, Temperature 230 °C	20 g/10 min @Load 4.76 lb, Temperature 446 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	95	95	ASTM D2240
Hardness, Shore D	55	55	ASTM D2240

Mechanical Properties Tensile Strength at Break	Metric 20.0 MPa	English 2900 psi	Comments ASTM D638
Film Tensile Strength at Yield, MD	13.7 MPa	1990 psi	ASTM D882
Film Tensile Strength at Yield, TD	13.5 MPa	1960 psi	ASTM D882
Tensile Strength, Yield	14.0 MPa	2030 psi	ASTM D638
Film Elongation at Break, MD	550 %	550 %	ASTM D882
Film Elongation at Break, TD	550 %	550 %	ASTM D882
Film Elongation at Yield, MD	26 %	26 %	ASTM D882
Film Elongation at Yield, TD	26 %	26 %	ASTM D882
Elongation at Break	300 %	300 %	ASTM D638
Elongation at Yield	30 %	30 %	ASTM D638
Tensile Modulus	0.170 GPa	24.7 ksi	ASTM D638
Flexural Modulus	0.150 GPa	21.8 ksi	ASTM D790
Izod Impact, Notched	0.500 J/cm @Temperature -40.0 °C	0.937 ft-lb/in @Temperature -40.0 °F	ASTM D256
Coefficient of Friction	>= 1.0	>= 1.0	ASTM D1894
Tear Strength, Total	370 N	83.2 lb (f)	ASTM D1004
Film Tensile Strength at Break, MD	23.7 MPa	3440 psi	ASTM D882
Film Tensile Strength at Break, TD	22.6 MPa	3280 psi	ASTM D882
Tangent Modulus	179 MPa	26000 psi	T.D.; ASTM D882
	185 MPa	26800 psi	M.D.; ASTM D882
Torsional Stiffness	240 MPa @Temperature -28.0 °C	34800 psi @Temperature -18.4 °F	ASTM D1043
	930 MPa @Temperature <=-70.0 °C	135000 psi @Temperature <=-94.0 °F	ASTM D1043

Thermal Properties	Metric	English	Comments
Heat of Fusion	27.0 J/g	11.6 BTU/lb	ASTM E793
CTE, linear	150 µm/m-°C	83.3 µin/in-°F	ASTM D696

Thermal Properties	Metric	English	Comments
	1.60 J/g-°C @Temperature 25.0 °C	0.382 BTU/lb-°F @Temperature 77.0 °F	
	1.80 J/g-°C @Temperature 100 °C	0.430 BTU/lb-°F @Temperature 212 °F	solid; DSC
	2.00 J/g-°C @Temperature 150 °C	0.478 BTU/lb-°F @Temperature 302 °F	solid; DSC
	2.30 J/g-°C @Temperature 175 °C	0.550 BTU/lb-°F @Temperature 347 °F	solid; DSC
	2.30 J/g-°C @Temperature 225 °C	0.550 BTU/lb-°F @Temperature 437 °F	melt; DSC
	3.10 J/g-°C @Temperature 200 °C	0.741 BTU/lb-°F @Temperature 392 °F	transition; DSC
Thermal Conductivity	0.190 W/m-K	1.32 BTU-in/hr-ft ² -°F	ASTM C177
Melting Point	207 °C	405 °F	Crystalline Peak; ASTM D3418
Crystallization Temperature	140 °C	284 °F	DSC
Vicat Softening Point	170 °C @Load 1.00 kg	338 °F @Load 2.20 lb	ASTM D1525
Brittleness Temperature	<= -75.0 °C	<= -103 °F	ASTM D746
Glass Transition Temp, Tg	-3.00 °C	26.6 °F	DSC

Optical Properties	Metric	English	Comments
Refractive Index	1.51	1.51	n _D ; ASTM D542
Haze	1.0 %	1.0 %	for Film; ASTM D1003
Gloss	80 %	80 %	for Film, 45°; ASTM D2457
Transmission, Visible	90 % @Thickness 0.130 mm	90 % @Thickness 0.00512 in	Regular, Film; ASTM D1003
	93 % @Thickness 0.130 mm	93 % @Thickness 0.00512 in	Total, Film; ASTM D1003

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215, Fengxian District, Shanghai City, China