Eastman 9921W PET Film (discontinued **)

Category : Polymer , Film , Thermoplastic , Polyester, TP , Polyethylene Terephthalate (PET) , Polyethylene Terephthalate (PET), Unreinforced

Material Notes:

Voridian PET 9921W is a copolymer PET. Typical applications include containers for automotive parts, household products, and pharmaceutical and food packaging. Voridian PET thermoplastic polyesters are condensation polymers produced by a continuous melt-phase polymerization process followed by a solid-state polymerization process. It is a copolymer PET that has been crystallized. Color concentrates, additives, and denest versions of 9921 are available on request. Applications/UsesAPET sheetAutomotive parts containersFood packagingHousehold products containersPharmaceutical containersWine and liquor containersWater bottlesCarbonated soft drink bottles

Order this product through the following link:
http://www.lookpolymers.com/polymer_Eastman-9921W-PET-Film-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Bulk Density	0.817 g/cc	0.0295 lb/in³	Poured; ASTM D1895
	0.881 g/cc	0.0318 lb/in³	Vibrated; ASTM D1895
Density	1.33 g/cc	0.0480 lb/in³	Film; ASTM D1505
	1.40 g/cc	0.0506 lb/in³	Crystalline Density; ASTM D1505
Melt Density	1.20 g/cc @Temperature 285 °C	0.0434 lb/in³ @Temperature 545 °F	ASTM D1238
Particle Size	2500 µm	2500 µm	Pellet Size
Water Vapor Transmission	6.00 g/m²/day	0.386 g/100 in²/day	ASTM F372
Oxygen Transmission	5.10 cc-mm/m²-24hr-atm	13.0 cc-mil/100 in²-24hr-atm	ASTM D3985
Carbon Dioxide Transmission	28.0 cc-mm/m²-24hr-atm	71.1 cc-mil/100 in²-24hr-atm	ASTM D1434
Viscosity Measurement	0.75	0.75	Intrinsic; EMN-A-AC-G-V-1
	0.78 - 0.82	0.78 - 0.82	Pellet, Intrinsic; VGAS-A-AN-G-V-1
Thickness	250 microns	9.84 mil	

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	59.0 MPa	8560 psi	ASTM D882
Film Tensile Strength at Yield, TD	57.0 MPa	8270 psi	ASTM D882
Film Elongation at Break, MD	300 %	300 %	ASTM D882

Mechanical Properties	Metric	English	Comments
Film Elongation at Break, TD	200 %	200 %	ASTM D882
Film Elongation at Yield, MD	4.0 %	4.0 %	ASTM D882
Film Elongation at Yield, TD	4.0 %	4.0 %	ASTM D882
Tensile Modulus	2.20 GPa	319 ksi	TD; ASTM D882
	2.20 GPa	319 ksi	MD; ASTM D882
Izod Impact, Unnotched (ISO)	NB	NB	ISO 180
	160 kJ/m² @Temperature -40.0 °C	76.1 ft-lb/in² @Temperature -40.0 °F	ISO 180
Tear Strength, Total	15.0 N	3.37 lb (f)	Split Tear Method, 254mm/min, MD; ASTM D1938
	16.0 N	3.60 lb (f)	Split Tear Method, 254mm/min, TD; ASTM D1938
	102 N	22.9 lb (f)	PPT Tear Resistance, MD; ASTM D2582
	120 N	27.0 lb (f)	PPT Tear Resistance, TD; ASTM D2582
Tear Strength	54.0 kN/m	308 pli	Trouser Tear Resistance, MD; ISO 6383-1
	59.0 kN/m	337 pli	Trouser Tear Resistance, TD; ISO 6383-1
Elmendorf Tear Strength, MD	4.00 g/micron	102 g/mil	ASTM D1922
Elmendorf Tear Strength, TD	5.20 g/micron	132 g/mil	ASTM D1922
Dart Drop	1.60 g/micron	40.6 g/mil	at -18°C; ASTM D1709
	2.00 g/micron	50.8 g/mil	23°C; ASTM D1709
Film Tensile Strength at Break, MD	58.0 MPa	8410 psi	ASTM D882
Film Tensile Strength at Break, TD	39.0 MPa	5660 psi	ASTM D882

Thermal Properties	Metric	English	Comments
Heat of Fusion	56.0 J/g	24.1 BTU/lb	ASTM E793
Specific Heat Capacity	1.10 J/g-°C	0.263 BTU/lb-°F	ASTM E1269
	1.30 J/g-°C @Temperature 80.0 °C	0.311 BTU/lb-°F @Temperature 176 °F	ASTM E1269
	1.40 J/g-°C	0.335 BTU/lb-°F	ASTM E1269

Thermal Properties	Metric	English	Comments
	@Temperature 100 °C	@Temperature 212 °F	
	1.90 J/g-°C @Temperature 200 °C	0.454 BTU/lb-°F @Temperature 392 °F	ASTM E1269
	2.10 J/g-°C @Temperature 280 °C	0.502 BTU/lb-°F @Temperature 536 °F	ASTM E1269
Melting Point	245 °C	473 °F	Crystalline Peak Melting Point; ASTM D3418

Optical Properties	Metric	English	Comments
Haze	0.80 %	0.80 %	ASTM D1003
Gloss	108 %	108 %	at 45°; ASTM D2457
Transmission, Visible	85 %	85 %	Transparency; ASTM D1746
	89 %	89 %	Regular Transmittance; ASTM D1003
	91 %	91 %	Total Transmittance; ASTM D1003

Descriptive Properties	Value	Comments
Acetaldehyde	<1ppm	VKCA-A-AS-G-GC-0001
Color, CIE a*	-3.8 to -0.8	VGAS-A-AN-G-RS-001
Color, CIE b*	-2.3 to 1.7	VGAS-A-AN-G-RS-001
Color, CIE L*	78 min	VGAS-A-AN-G-RS-001
Fines, wt%, max	0.05	VGAS-A-AN-G-GA-1
Pellet Shape	Cubical	

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