

## Eastman 9921W PET Injection Molded (discontinued \*\*)

Category : Polymer , 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/Uses APET sheet Automotive parts containers Food packaging Household products containers Pharmaceutical containers Wine and liquor containers Water bottles Carbonated soft drink bottles

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Eastman-9921W-PET-Injection-Molded-nbspdiscontinued-.php](http://www.lookpolymers.com/polymer_Eastman-9921W-PET-Injection-Molded-nbspdiscontinued-.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.34 g/cc	1.34 g/cc	ASTM D1505
Bulk Density	0.817 g/cc	0.0295 lb/in <sup>3</sup>	Poured; ASTM D1895
	0.881 g/cc	0.0318 lb/in <sup>3</sup>	Vibrated; ASTM D1895
Density	1.34 g/cc	0.0484 lb/in <sup>3</sup>	ISO 1183
	1.40 g/cc	0.0506 lb/in <sup>3</sup>	Crystalline Density; ASTM D1505
Melt Density	1.20 g/cc	0.0434 lb/in <sup>3</sup>	ASTM D1238
	@Temperature 285 °C	@Temperature 545 °F	
Particle Size	2500 µm	2500 µm	Pellet Size
Viscosity Measurement	0.78 - 0.82	0.78 - 0.82	Pellet, Intrinsic; VGAS-A-AN-G-V-1

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	112	112	ASTM D785
	114	114	ISO 2039-2
Tensile Strength at Break	25.0 MPa	3630 psi	ISO 527
	25.0 MPa	3630 psi	ASTM D638
Tensile Strength, Yield	58.0 MPa	8410 psi	ISO 527
	60.0 MPa	8700 psi	ASTM D638
Elongation at Break	110 %	110 %	ISO 527
	110 %	110 %	ASTM D638

Mechanical Properties	Metric <sup>Pa</sup>	English	Comments
	2.50 GPa	363 ksi	ASTM D638
Flexural Yield Strength	80.0 MPa	11600 psi	ISO 178
	85.0 MPa	12300 psi	ASTM D790
Flexural Modulus	2.40 GPa	348 ksi	ISO 178
	2.60 GPa	377 ksi	ASTM D790
Izod Impact, Notched	0.270 J/cm @Temperature -40.0 °C	0.506 ft-lb/in @Temperature -40.0 °F	ASTM D256
	0.360 J/cm @Temperature 23.0 °C	0.674 ft-lb/in @Temperature 73.4 °F	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D4812
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ASTM D4812
Izod Impact, Notched (ISO)	3.10 kJ/m <sup>2</sup> @Temperature -40.0 °C	1.48 ft-lb/in <sup>2</sup> @Temperature -40.0 °F	ISO 180
	4.50 kJ/m <sup>2</sup> @Temperature 23.0 °C	2.14 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 180
Puncture Energy	0.800 J @Thickness 2.50 mm, Temperature -40.0 °C	0.590 ft-lb @Thickness 0.0984 in, Temperature -40.0 °F	max load; ISO 6603-2
	1.00 J @Thickness 3.20 mm, Temperature -40.0 °C	0.738 ft-lb @Thickness 0.126 in, Temperature -40.0 °F	max load; ISO 6603-2
	1.60 J @Thickness 2.50 mm, Temperature -40.0 °C	1.18 ft-lb @Thickness 0.0984 in, Temperature -40.0 °F	max load; ASTM D3763
	2.10 J @Thickness 3.20 mm, Temperature -40.0 °C	1.55 ft-lb @Thickness 0.126 in, Temperature -40.0 °F	max load; ASTM D3763
	15.0 J @Thickness 2.50 mm, Temperature 23.0 °C	11.1 ft-lb @Thickness 0.0984 in, Temperature 73.4 °F	max load; ISO 6603-2
	18.0 J	13.3 ft-lb	

Mechanical Properties	Metric	English	Comments
	@ Thickness 3.20 mm, Temperature 23.0 °C	@ Thickness 0.126 in, Temperature 73.4 °F	max load; ISO 6603-2
	26.0 J	19.2 ft-lb	
	@ Thickness 2.50 mm, Temperature 23.0 °C	@ Thickness 0.0984 in, Temperature 73.4 °F	max load; ASTM D3763
	31.0 J	22.9 ft-lb	
	@ Thickness 3.20 mm, Temperature 23.0 °C	@ Thickness 0.126 in, Temperature 73.4 °F	max load; ASTM D3763

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	0.311 BTU/lb-°F	ASTM E1269
	@ Temperature 80.0 °C	@ Temperature 176 °F	
	1.40 J/g-°C	0.335 BTU/lb-°F	ASTM E1269
	@ Temperature 100 °C	@ Temperature 212 °F	
	1.90 J/g-°C	0.454 BTU/lb-°F	ASTM E1269
	@ Temperature 200 °C	@ Temperature 392 °F	
	2.10 J/g-°C	0.502 BTU/lb-°F	ASTM E1269
	@ Temperature 280 °C	@ Temperature 536 °F	
Melting Point	245 °C	473 °F	Crystalline Peak Melting Point; ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	69.0 °C	156 °F	ISO 75
	69.0 °C	156 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	67.0 °C	153 °F	ASTM D648
	67.0 °C	153 °F	ISO 75

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

Descriptive Properties	Value	Comments
Pellet Shape	Cubical	YGAS-A-AN-G-GA-1

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