

Eastman 9921 PET Injection Molded (discontinued **)

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

Material Notes:

VORIDIAN polymer 9921 is a copolymer PET that has been crystallized. Color concentrates of polymer 9921 are available on request. Applications/Uses Automotive parts containers Food packaging Household products containers Pharmaceutical containers Medical Health and Nutrition Containers Food-contact containers Carbonated soft drink containers

Order this product through the following link:

http://www.lookpolymers.com/polymer_Eastman-9921-PET-Injection-Molded-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.33 g/cc	1.33 g/cc	ASTM D792
Bulk Density	0.817 g/cc	0.0295 lb/in ³	Poured; ASTM D1895
	0.881 g/cc	0.0318 lb/in ³	Vibrated; ASTM D1895
Density	1.33 g/cc	0.0480 lb/in ³	ISO 1183
	1.40 g/cc	0.0506 lb/in ³	Crystalline Density; ASTM D1505
Melt Density	1.20 g/cc	0.0434 lb/in ³	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	57.0 MPa	8270 psi	ISO 527
	58.0 MPa	8410 psi	ASTM D638
Elongation at Break	120 %	120 %	ISO 527
	120 %	120 %	ASTM D638
Tensile Modulus	2.40 GPa	348 ksi	ISO 527
	2.40 GPa	348 ksi	ASTM D638

Mechanical Properties	Metric	English	Comments
	84.0 MPa	12200 psi	ASTM D790
Flexural Modulus	2.30 GPa	334 ksi	ISO 178
	2.50 GPa	363 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
	0.400 J/cm @Temperature 23.0 °C	0.749 ft-lb/in @Temperature 73.4 °F	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D4812
	NB @Temperature -40.0 °C	NB @Temperature -40.0 °F	ASTM D4812
Izod Impact, Notched (ISO)	3.10 kJ/m² @Temperature -40.0 °C	1.48 ft-lb/in² @Temperature -40.0 °F	ISO 180
	4.50 kJ/m² @Temperature 23.0 °C	2.14 ft-lb/in² @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 @Thickness 3.20 mm, Temperature 23.0 °C	13.3 ft-lb @Thickness 0.126 in, Temperature 73.4 °F	max load; ISO 6603-2
	26.0 J	19.2 ft-lb	

Mechanical Properties	Metric	English	Comments
	@ 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	

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	240 °C	464 °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)	65.0 °C	149 °F	ASTM D648
	65.0 °C	149 °F	ISO 75

Descriptive Properties	Value	Comments
Acetaldehyde	<3ppm	VKCA-A-AS-G-GC-0001
Color, CIE a*	-2.5 ± 1.5	VGAS-A-AN-G-RS-001
Color, CIE b*	0.3 ± 1.5	VGAS-A-AN-G-RS-001
Color, CIE L*	77.5 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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