



Surlyn® 9720

DuPont Packaging & Industrial Polymers - Ethylene Methacrylic Acid

Monday, September 21, 2020

General Information

Product Description

DuPont™ Surlyn® 9720 is an ionomer of ethylene acid copolymer.

This polymeric material can be processed in conventional extrusion and injection equipment designed to process polyethylene and ethylene copolymer type resins, to create various shapes and sheeting.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Antioxidant		
Features	• Antioxidant	• Copolymer	
Uses	• Blow Molding Applications	• Sheet	• Wire & Cable Applications
Agency Ratings	• MIL P-46124 MR, Type V, Class I		
Forms	• Pellets		
Processing Method	• Blow Molding • Extrusion	• Injection Molding • Sheet Extrusion	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.962		ASTM D792
Density	0.960	g/cm ³	ISO 1183
Melt Mass-Flow Rate (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ISO 1133
Ion Type	Zinc		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Yield, 73°F, Compression Molded)	1700	psi	ASTM D638
Tensile Strength (Break, 73°F)	1490	psi	ASTM D638
Tensile Stress (Break, 73°F)	1490	psi	ISO 527-2
Tensile Elongation (Break, 73°F)	440	%	ASTM D638
Tensile Strain (Break, 73°F)	440	%	ISO 527-2
Flexural Modulus			ASTM D790
-4°F	104000	psi	
73°F	36300	psi	
Abrasion Resistance - NBS Index	410		ASTM D1630
Elastomers	Nominal Value	Unit	Test Method
Tear Strength (73°F)	5.82	lbf/in	ASTM D624
Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength			ASTM D1822
-40°F	495	ft-lb/in ²	
73°F	600	ft-lb/in ²	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	61		ASTM D2240
Shore Hardness (Shore D)	61		ISO 868

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Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-166	°F	ASTM D746
Vicat Softening Temperature	160	°F	ASTM D1525
Vicat Softening Temperature	160	°F	ISO 306
Peak Melting Temperature	198	°F	ASTM D3418
Melting Temperature (DSC)	198	°F	ISO 3146
Freezing Point			
--	169	°F	ASTM D3418
--	169	°F	ISO 3146
Optical	Nominal Value	Unit	Test Method
Haze (250.0 mil)	12.0	%	ASTM D1003

Processing Information

Injection	Nominal Value	Unit
Processing (Melt) Temp	365 to 545	°F

Notes

¹ Typical properties: these are not to be construed as specifications.

² Type IV, 2.0 in/min