

Surlyn® 9721

Ethylene Methacrylic Acid
DuPont Packaging & Industrial Polymers

Message:

Surlyn® 9721 is a zinc ionomer thermoplastic resin. It is available for use in conventional extrusion and injection equipment, to create various sheets or shapes.

Surlyn® 9721 thermoplastic resin is an advanced ethylene/methacrylic acid (E/MAA) copolymer, in which the MAA acid groups have been partially neutralized with zinc ions.

General Information			
Features	Copolymer		
Agency Ratings	FDA 21 CFR 177.1330(a)		
Forms	Pellets		
Processing Method	Blow Molding		
	Extrusion		
	Injection Molding		
	Sheet Extrusion		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.960	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238, ISO 1133
Ion Type	Zinc		
Abrasion Resistance - NBS Index	410		ASTM D1630
Freezing Point			
--	76	°C	ASTM D3418
--	76	°C	ISO 3146

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	61		ASTM D2240, ISO 868

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Yield, 23°C, Compression Molded ¹	11.7	MPa	ASTM D638
Break, 23°C	10.3	MPa	ASTM D638, ISO 527-2
Tensile Elongation (Break, 23°C)	440	%	ASTM D638, ISO 527-2
Flexural Modulus			
-20°C	717	MPa	ASTM D790
23°C	250	MPa	

Elastomers	Nominal Value	Unit	Test Method
Tear Strength (23°C)	1.02	kN/m	ASTM D624

Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength			ASTM D1822

-40°C	1040	kJ/m ²	
23°C	1260	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-110	°C	ASTM D746
Vicat Softening Temperature	71.0	°C	ASTM D1525, ISO 306
Peak Melting Temperature	92.0	°C	ASTM D3418, ISO 3146
Optical	Nominal Value	Unit	Test Method
Haze (6350 μm)	12	%	ASTM D1003
Injection	Nominal Value	Unit	
Processing (Melt) Temp	185 to 285	°C	
NOTE			
1.	Type IV, 50 mm/min		

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