



## Surlyn® 9650

DuPont Packaging & Industrial Polymers - Ethylene Methacrylic Acid

Monday, September 21, 2020

### General Information

#### Product Description

DuPont™ Surlyn® 9650 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 • Europe • Asia Pacific • Latin America • North America
Features	• Copolymer
Uses	• Sheet
Forms	• Pellets
Processing Method	• Extrusion • Injection Molding • Sheet Extrusion

### ASTM & ISO Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.952		ASTM D792
Density	0.950	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (190°C/2.16 kg)	5.0	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	5.0	g/10 min	ISO 1133
Ion Type	Zinc		

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>2</sup> (Yield, 73°F, Compression Molded)	1800	psi	ASTM D638
Tensile Strength (Break, 73°F)	3210	psi	ASTM D638
Tensile Stress (Break, 73°F)	3210	psi	ISO 527-2
Tensile Elongation (Break, 73°F)	410	%	ASTM D638
Tensile Strain (Break, 73°F)	410	%	ISO 527-2
Flexural Modulus			ASTM D790
-4°F	98600	psi	
73°F	31900	psi	
Abrasion Resistance - NBS Index	270		ASTM D1630

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F)	15	ft-lb/in	ASTM D256
Tensile Impact Strength			ASTM D1822
-40°F	425	ft-lb/in <sup>2</sup>	
73°F	460	ft-lb/in <sup>2</sup>	

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	63		ASTM D2240
Shore Hardness (Shore D)	63		ISO 868

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Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-112	°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
CLTE - Flow (-4 to 90°F)	8.3E-5	in/in/°F	ASTM D696
Freezing Point			
--	163	°F	ASTM D3418
--	163	°F	ISO 3146
Optical	Nominal Value	Unit	Test Method
Haze (250.0 mil)	27.0	%	ASTM D1003

### Processing Information

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

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Type IV, 2.0 in/min