

## DuPont Elvax® 550 Ethylene-Vinyl Acetate Copolymer Resin

Category : Polymer , Thermoplastic , Ethylene Vinyl Acetate , Ethylene Vinyl Acetate; Molded/Extruded

### Material Notes:

Elvax® resins offer a unique combination of processing and performance characteristics. They provide outstanding toughness and resilience and maintain flexibility over a broad temperature range without the need for plasticizers. Elvax® resins can be used alone or to improve the flexibility, resilience and toughness of other resins. Depending on the demands of the particular application, they can be pigmented, foamed, filled, and/or crosslinked. In addition to their performance advantages, Elvax® resins are processed easily using conventional thermoplastic processing techniques, i.e., injection molding, extrusion and foaming, as well as rubber processing techniques, i.e., Banbury mixing, foam extrusion and molding. Test specimens except for tensile impact where prepared by compression molding (ASTM D1928, procedure C). Tensile impact samples were injection molded. Processing Information: Molding and Extruding Modified and unmodified Elvax® resins can be processed in conventional thermoplastic and rubber processing equipment. The temperature profile will vary with machine type, size and screw design as well as with part size, thickness or configuration. Compounding Elvax® resins are compatible with a variety of other resins and elastomers including polyethylene, polypropylene and styrene-butadiene rubber. Clays and other inorganic fillers can be added to improve abrasion resistance and lower cost. Foaming Agents Elvax® resins are readily foamed using chemical or physical blowing agents. Crosslinking Agents Peroxides such as "Di-Cup"† and "Vul-Cup"† dicumyl peroxide can be used to crosslink or vulcanize Elvax® resins. (†Hercules Inc.) Information provided by DuPont.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DuPont-Elvax-550-Ethylene-Vinyl-Acetate-Copolymer-Resin.php](http://www.lookpolymers.com/polymer_DuPont-Elvax-550-Ethylene-Vinyl-Acetate-Copolymer-Resin.php)

Physical Properties	Metric	English	Comments
Density	0.935 g/cc	0.0338 lb/in <sup>3</sup>	ASTM D792
Vinyl Acetate Content	15 %	15 %	TGA
Melt Index of Compound	8.0 g/10 min	8.0 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	91	91	ASTM D2240
Hardness, Shore D	40	40	ASTM D2240
Tensile Strength, Ultimate	14.0 MPa	2030 psi	Type IV, crosshead speed 2 in/min; ASTM D638
	6.90 MPa @Temperature 49.0 °C	1000 psi @Temperature 120 °F	Type IV, crosshead speed 2 in/min; ASTM D638
	23.0 MPa @Temperature -20.0 °C	3340 psi @Temperature -4.00 °F	Type IV, crosshead speed 2 in/min, at -20°C; ASTM D638
Elongation at Break	700 %	700 %	Type IV, crosshead speed 2 in/min; ASTM D638
	500 %	500 %	Type IV, crosshead speed 2 in/min, at

Mechanical Properties	Metric @ Temperature -20.0 °C	English @ Temperature -4.00 °F	-20 °C; ASTM D638 Comments
	650 %	650 %	Type IV, crosshead speed 2 in/min; ASTM D638
	@Temperature 49.0 °C	@Temperature 120 °F	
Modulus of Elasticity	0.0590 GPa	8.56 ksi	
	0.154 GPa	22.3 ksi	
	@Temperature -20.0 °C	@Temperature -4.00 °F	
Flexural Modulus	0.0520 GPa	7.54 ksi	ASTM D790
	0.0270 GPa	3.92 ksi	ASTM D790
	@Temperature 49.0 °C	@Temperature 120 °F	
	0.223 GPa	32.3 ksi	ASTM D790
	@Temperature -20.0 °C	@Temperature -4.00 °F	
Flexural Stiffness	59.00 MPa	8557 psi	
	154.0 MPa	22340 psi	
Tensile Impact Strength	400 kJ/m²	190 ft-lb/in²	At -20°C; ASTM D1822
	505 kJ/m²	240 ft-lb/in²	At 23°C; ASTM D1822
Compression Set	50 %	50 %	Method B, 10 days at 25°C; ASTM D395
	70 %	70 %	Method B, 22 hours; ASTM D395
	@Temperature 70.0 °C	@Temperature 158 °F	

Thermal Properties	Metric	English	Comments
Vicat Softening Point	64.0 °C	147 °F	ASTM D1525
Brittleness Temperature	<= -100 °C	<= -148 °F	ASTM D762

Processing Properties	Metric	English	Comments
Processing Temperature	121 - 204 °C	250 - 399 °F	

Descriptive Properties	Value	Comments
Cycle time	0.5-2 minutes	Molding, equipment and part design dependent
Vinyl Acetate Content	15 wt. %	

## Contact Songhan Plastic Technology Co.,Ltd.

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