

Overview of materials for Ethylene Vinyl Acetate Copolymer (EVA), Extrusion/Coating Grade

Category : Polymer , Thermoplastic , Ethylene Vinyl Acetate , Ethylene Vinyl Acetate Copolymer (EVA), Extrusion/Coating Grade

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Ethylene Vinyl Acetate Copolymer (EVA), Extrusion/Coating Grade". Each property range of values reported is minimum and maximum values of appropriate MatWeb entries. The comments report the average value, and number of data points used to calculate the average. The values are not necessarily typical of any specific grade, especially less common values and those that can be most affected by additives or processing methods.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Overview-of-materials-for-Ethylene-Vinyl-Acetate-Copolymer-EVA-ExtrusionCoating-Grade.php

Physical Properties	Metric	English	Comments
Density	0.926 - 0.960 g/cc	0.0335 - 0.0347 lb/in ³	Average value: 0.942 g/cc Grade Count:51
Moisture Vapor Transmission	1.30 - 1.65 cc-mm/m ² -24hr-atm	3.30 - 4.19 cc-mil/100 in ² -24hr-atm	Average value: 1.44 cc-mm/m ² -24hr-atm Grade Count:7
Oxygen Transmission	185 - 264 cc-mm/m ² -24hr-atm	470 - 671 cc-mil/100 in ² -24hr-atm	Average value: 215 cc-mm/m ² -24hr-atm Grade Count:7
Viscosity	1.00e+6 - 2.00e+6 cP @Temperature 190 - 190 °C	1.00e+6 - 2.00e+6 cP @Temperature 374 - 374 °F	Average value: 1.24e+6 cP Grade Count:5
	1.00e+6 - 2.00e+6 cP @Shear Rate 50.0 - 50.0 1/s	1.00e+6 - 2.00e+6 cP @Shear Rate 50.0 - 50.0 1/s	Average value: 1.24e+6 cP Grade Count:5
Vinyl Acetate Content	6.00 - 33.0 %	6.00 - 33.0 %	Average value: 19.1 % Grade Count:25
Melt Flow	0.400 - 43.0 g/10 min	0.400 - 43.0 g/10 min	Average value: 10.9 g/10 min Grade Count:52

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	55.0 - 96.0	55.0 - 96.0	Average value: 78.2 Grade Count:14
Hardness, Shore D	19.0 - 45.0	19.0 - 45.0	Average value: 31.5 Grade Count:16
Tensile Strength, Ultimate	3.03 - 17.0 MPa	440 - 2470 psi	Average value: 10.2 MPa Grade Count:17
Film Tensile Strength at Yield, MD	4.00 - 9.00 MPa	580 - 1310 psi	Average value: 6.08 MPa Grade Count:5
Film Tensile Strength at Yield, TD	3.70 - 10.0 MPa	537 - 1450 psi	Average value: 6.74 MPa Grade Count:5
	5.24 - 6.31 MPa	760 - 915 psi	Average value: 5.69 MPa Grade

Tensile Strength, Yield Mechanical Properties	Metric	English	Count:3 Comments
Film Elongation at Break, MD	360 - 600 %	360 - 600 %	Average value: 505 % Grade Count:12
Film Elongation at Break, TD	500 - 653 %	500 - 653 %	Average value: 572 % Grade Count:12
Elongation at Break	660 - 800 %	660 - 800 %	Average value: 768 % Grade Count:17
Elongation at Yield	170 - 260 %	170 - 260 %	Average value: 203 % Grade Count:3
Flexural Modulus	0.0125 - 0.101 GPa	1.82 - 14.6 ksi	Average value: 0.0460 GPa Grade Count:12
Secant Modulus, MD	0.0380 - 0.120 GPa	5.51 - 17.4 ksi	Average value: 0.0698 GPa Grade Count:6
Secant Modulus, TD	0.0430 - 0.125 GPa	6.24 - 18.1 ksi	Average value: 0.0708 GPa Grade Count:6
Coefficient of Friction	0.150 - 3.90	0.150 - 3.90	Average value: 0.926 Grade Count:9
Elmendorf Tear Strength, MD	3.70 - 4.21 g/micron	94.0 - 107 g/mil	Average value: 3.91 g/micron Grade Count:7
Elmendorf Tear Strength, TD	3.70 - 5.24 g/micron	94.0 - 133 g/mil	Average value: 4.36 g/micron Grade Count:4
Dart Drop Test	85.0 - 700 g	0.187 - 1.54 lb	Average value: 290 g Grade Count:5
Film Tensile Strength at Break, MD	15.0 - 31.0 MPa	2180 - 4500 psi	Average value: 24.0 MPa Grade Count:12
Film Tensile Strength at Break, TD	13.0 - 39.0 MPa	1890 - 5660 psi	Average value: 23.9 MPa Grade Count:9

Thermal Properties	Metric	English	Comments
Melting Point	37.0 - 104 °C	98.6 - 219 °F	Average value: 75.4 °C Grade Count:47
Vicat Softening Point	40.0 - 81.0 °C	104 - 178 °F	Average value: 58.9 °C Grade Count:45
Brittleness Temperature	-85.0 - -77.0 °C	-121 - -107 °F	Average value: -82.3 °C Grade Count:3

Optical Properties	Metric	English	Comments
Haze	2.00 - 48.0 %	2.00 - 48.0 %	Average value: 10.9 % Grade Count:14
Gloss	22.0 - 109 %	22.0 - 109 %	Average value: 66.6 % Grade Count:14
Transmission, Visible	4.50 - 75.0 %	4.50 - 75.0 %	Average value: 36.8 % Grade Count:4

Processing Properties	Metric	English	Comments
Processing Temperature	160 - 235 °C	320 - 455 °F	Average value: 221 °C Grade Count:9

Melt Temperature	125 - 232 °C	257 - 450 °F	Average value: 190 °C Grade Count:18
Processing Properties	Metric	English	Comments

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