

## Overview of materials for Ethylene Butyl Acrylate

Category : Polymer , Thermoplastic , Ethylene Butyl Acrylate

### Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Ethylene Butyl Acrylate". 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-Butyl-Acrylate.php](http://www.lookpolymers.com/polymer_Overview-of-materials-for-Ethylene-Butyl-Acrylate.php)

Physical Properties	Metric	English	Comments
Density	0.895 - 1.48 g/cc	0.0323 - 0.0535 lb/in <sup>3</sup>	Average value: 0.986 g/cc Grade Count:93
Viscosity	8300 - 8340 cP @Temperature 190 - 190 °C	8300 - 8340 cP @Temperature 374 - 374 °F	Average value: 8320 cP Grade Count:2
Butyl Acrylate Content	6.00 - 37.0 %	6.00 - 37.0 %	Average value: 25.2 % Grade Count:14
Thickness	25.0 - 40.0 microns	0.984 - 1.57 mil	Average value: 35.0 microns Grade Count:3
Melt Flow	0.250 - 900 g/10 min	0.250 - 900 g/10 min	Average value: 34.2 g/10 min Grade Count:84

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	44.0 - 90.0	44.0 - 90.0	Average value: 71.1 Grade Count:20
Hardness, Shore D	23.0 - 80.0	23.0 - 80.0	Average value: 43.8 Grade Count:18
Tensile Strength, Ultimate	0.965 - 31.0 MPa	140 - 4500 psi	Average value: 13.9 MPa Grade Count:62
Tensile Strength, Yield	3.50 - 38.0 MPa	508 - 5510 psi	Average value: 22.1 MPa Grade Count:57
Film Elongation at Break, MD	200 - 240 %	200 - 240 %	Average value: 213 % Grade Count:3
Film Elongation at Break, TD	600 - 680 %	600 - 680 %	Average value: 627 % Grade Count:3
Elongation at Break	4.00 - 1210 %	4.00 - 1210 %	Average value: 340 % Grade Count:64
Elongation at Yield	2.30 - 14.5 %	2.30 - 14.5 %	Average value: 5.52 % Grade Count:42
Modulus of Elasticity	0.0250 - 4.50 GPa	3.63 - 653 ksi	Average value: 1.69 GPa Grade Count:45
Flexural Modulus	0.00538 - 4.35 GPa	0.780 - 631 ksi	Average value: 1.49 GPa Grade Count:35

Mechanical Properties	Metric	English	Comments
Izod Impact Unnotched	4.20304 - 4.20304 J @Temperature -17.8 - -17.8 °C	3.10000 - 3.10000 ft-lb @Temperature 0.000 - 0.000 °F	Average value: 4.20 J Grade Count: 1
Izod Impact, Notched (ISO)	3.15 - 52.5 kJ/m <sup>2</sup>	1.50 - 25.0 ft-lb/in <sup>2</sup>	Average value: 34.3 kJ/m <sup>2</sup> Grade Count: 7
Charpy Impact Unnotched	2.31 - 10.1 J/cm <sup>2</sup>	11.0 - 48.0 ft-lb/in <sup>2</sup>	Average value: 5.32 J/cm <sup>2</sup> Grade Count: 3
	1.596 - 2.10 J/cm <sup>2</sup> @Temperature -30.0 - 0.000 °C	7.596 - 9.99 ft-lb/in <sup>2</sup> @Temperature -22.0 - 32.0 °F	Average value: 1.85 J/cm <sup>2</sup> Grade Count: 1
Charpy Impact, Notched	0.231 - 6.51 J/cm <sup>2</sup>	1.10 - 31.0 ft-lb/in <sup>2</sup>	Average value: 1.42 J/cm <sup>2</sup> Grade Count: 38
	0.1302 - 1.491 J/cm <sup>2</sup> @Temperature -30.0 - 0.000 °C	0.6197 - 7.096 ft-lb/in <sup>2</sup> @Temperature -22.0 - 32.0 °F	Average value: 0.606 J/cm <sup>2</sup> Grade Count: 28
Gardner Impact	8.83543 - 8.83543 J @Temperature -28.9 - -28.9 °C	6.51667 - 6.51667 ft-lb @Temperature -20.0 - -20.0 °F	Average value: 8.84 J Grade Count: 1
	8.83543 - 8.83543 J @Thickness 3.17 - 3.17 mm	6.51667 - 6.51667 ft-lb @Thickness 0.125 - 0.125 in	Average value: 8.84 J Grade Count: 1
Dart Drop, Total Energy	24.9471 - 29.0145 J @Temperature -30.0 - -15.0 °C	18.4000 - 21.4000 ft-lb @Temperature -22.0 - 5.00 °F	Average value: 26.3 J Grade Count: 5
	26.1673 - 26.1673 J @Temperature -30.0 - -30.0 °C	19.3000 - 19.3000 ft-lb @Temperature -22.0 - -22.0 °F	Average value: 26.3 J Grade Count: 1
	26.1673 - 26.1673 J @Thickness 3.20 - 3.20 mm	19.3000 - 19.3000 ft-lb @Thickness 0.126 - 0.126 in	Average value: 26.3 J Grade Count: 1
Coefficient of Friction	0.100 - 0.450	0.100 - 0.450	Average value: 0.233 Grade Count: 3
Film Tensile Strength at Break, MD	24.0 - 25.0 MPa	3480 - 3630 psi	Average value: 24.3 MPa Grade Count: 3
Film Tensile Strength at Break, TD	15.0 - 18.0 MPa	2180 - 2610 psi	Average value: 17.0 MPa Grade Count: 3

Thermal Properties	Metric	English	Comments
CTE, linear	0.504 - 0.774 µm/m-°C	0.280 - 0.430 µin/in-°F	Average value: 0.583 µm/m-°C Grade Count: 5

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	68.9 - 142 °C	156 - 288 °F	Average value: 104 °C Grade Count:30
Deflection Temperature at 1.8 MPa (264 psi)	43.9 - 92.8 °C	111 - 199 °F	Average value: 57.1 °C Grade Count:47
Vicat Softening Point	40.0 - 153 °C	104 - 307 °F	Average value: 63.7 °C Grade Count:20
Brittleness Temperature	-73.0 - -30.0 °C	-99.4 - -22.0 °F	Average value: -62.3 °C Grade Count:4
Glass Transition Temp, Tg	-55.0 - -50.0 °C	-67.0 - -58.0 °F	Average value: -53.9 °C Grade Count:9
Ring & Ball Softening Point	55.0 - 190 °C	131 - 374 °F	Average value: 107 °C Grade Count:5

Electrical Properties	Metric	English	Comments
Electrical Resistivity	25.0 - 1.00e+16 ohm-cm	25.0 - 1.00e+16 ohm-cm	Average value: 2.95e+15 ohm-cm Grade Count:4
	40.0 - 3.60e+14 ohm-cm @Temperature 70.0 - 90.0 °C	40.0 - 3.60e+14 ohm-cm @Temperature 158 - 194 °F	Average value: 1.90e+14 ohm-cm Grade Count:3
Surface Resistance	1.70e+14 - 4.80e+14 ohm @Temperature 70.0 - 70.0 °C	1.70e+14 - 4.80e+14 ohm @Temperature 158 - 158 °F	Average value: 3.25e+14 ohm Grade Count:2
Dielectric Constant	2.70 - 6.10	2.70 - 6.10	Average value: 4.28 Grade Count:3
Dissipation Factor	0.00100 - 0.133	0.00100 - 0.133	Average value: 0.0462 Grade Count:3

Processing Properties	Metric	English	Comments
Processing Temperature	160 - 300 °C	320 - 572 °F	Average value: 221 °C Grade Count:12
Adapter Temperature	180 - 290 °C	356 - 554 °F	Average value: 240 °C Grade Count:6
Die Temperature	141 - 290 °C	285 - 554 °F	Average value: 235 °C Grade Count:7
Melt Temperature	115 - 290 °C	239 - 554 °F	Average value: 191 °C Grade Count:12

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