

Overview of materials for High Density Polyethylene (HDPE), Sheet/Thermoforming Grade

Category : Polymer , Thermoplastic , Polyethylene (PE) , HDPE , High Density Polyethylene (HDPE), Sheet/Thermoforming Grade

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "High Density Polyethylene (HDPE), Sheet/Thermoforming 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-High-Density-Polyethylene-HDPE-SheetThermoforming-Grade.php

Physical Properties	Metric	English	Comments
Density	0.937 - 1.06 g/cc	0.0339 - 0.0383 lb/in ³	Average value: 0.957 g/cc Grade Count:19
Environmental Stress Crack Resistance	30.0 - 1500 hour	30.0 - 1500 hour	Average value: 671 hour Grade Count:9
Melt Flow	0.200 - 21.0 g/10 min	0.200 - 21.0 g/10 min	Average value: 5.24 g/10 min Grade Count:13

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	60.0 - 70.0	60.0 - 70.0	Average value: 65.0 Grade Count:4
Hardness, Shore D	65.0 - 67.0	65.0 - 67.0	Average value: 65.9 Grade Count:7
Tensile Strength, Ultimate	21.4 - 30.3 MPa	3100 - 4390 psi	Average value: 26.2 MPa Grade Count:5
Tensile Strength, Yield	17.9 - 31.0 MPa	2600 - 4500 psi	Average value: 25.9 MPa Grade Count:15
Elongation at Break	500 - 800 %	500 - 800 %	Average value: 654 % Grade Count:13
Flexural Yield Strength	22.8 - 37.9 MPa	3310 - 5500 psi	Average value: 29.8 MPa Grade Count:5
Flexural Modulus	0.779 - 1.55 GPa	113 - 225 ksi	Average value: 1.18 GPa Grade Count:18
Izod Impact, Notched	5.30 - 7.50 J/cm	9.93 - 14.1 ft-lb/in	Average value: 6.57 J/cm Grade Count:3
	4.30 - 5.30 J/cm @Temperature -29.0 - -29.0 °C	8.06 - 9.93 ft-lb/in @Temperature -20.2 - -20.2 °F	Average value: 4.63 J/cm Grade Count:3
Gardner Impact	34.0 - 36.0 J	25.1 - 26.6 ft-lb	Average value: 34.5 J Grade Count:4
Tensile Impact	68.3 - 131 J/cm	128 - 245 ft-lb/in	Average value: 110 J/cm Grade Count:3

Mechanical Properties	Metric	English	Comments
Falling Dart Impact	271.164 - 271.164 J @Temperature -40.0 - - 40.0 °C	200.000 - 200.000 ft-lb @Temperature -40.0 - - 40.0 °F	Average value: 271 J Grade Count:1

Thermal Properties	Metric	English	Comments
CTE, linear	108 - 120 $\mu\text{m}/\text{m}\cdot\text{°C}$	60.0 - 66.7 $\mu\text{in}/\text{in}\cdot\text{°F}$	Average value: 116 $\mu\text{m}/\text{m}\cdot\text{°C}$ Grade Count:3
Deflection Temperature at 0.46 MPa (66 psi)	57.0 - 92.0 °C	135 - 198 °F	Average value: 74.1 °C Grade Count:10
Vicat Softening Point	122 - 134 °C	252 - 273 °F	Average value: 127 °C Grade Count:5
Brittleness Temperature	-118 - -75.0 °C	-180 - -103 °F	Average value: -87.7 °C Grade Count:9

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China