

Overview of materials for PVC, Foam Grade

Category : Polymer , Thermoplastic , Vinyl (PVC) , PVC, Foam Grade

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "PVC, Foam 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-PVC-Foam-Grade.php

Physical Properties	Metric	English	Comments
Density	0.0404 - 1.56 g/cc	0.00146 - 0.0564 lb/in ³	Average value: 0.683 g/cc Grade Count:39
Water Absorption	2.40 - 4.00 %	2.40 - 4.00 %	Average value: 3.05 % Grade Count:6
Water Vapor Transmission	0.900 - 7.50 g/m ² /day	0.0580 - 0.483 g/100 in ² /day	Average value: 4.14 g/m ² /day Grade Count:8
Viscosity Test	110 - 200 cm ³ /g	110 - 200 cm ³ /g	Average value: 128 cm ³ /g Grade Count:8

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	42.0 - 80.0	42.0 - 80.0	Average value: 59.2 Grade Count:21
Hardness, Shore OO	13.0 - 45.0	13.0 - 45.0	Average value: 28.7 Grade Count:3
Tensile Strength, Ultimate	0.903 - 20.0 MPa	131 - 2900 psi	Average value: 8.71 MPa Grade Count:24
Tensile Strength, Yield	0.103 - 0.414 MPa	15.0 - 60.0 psi	Average value: 0.317 MPa Grade Count:5
Elongation at Break	1.40 - 450 %	1.40 - 450 %	Average value: 220 % Grade Count:26
Modulus of Elasticity	0.0320 - 1.00 GPa	4.64 - 145 ksi	Average value: 0.302 GPa Grade Count:11
Flexural Yield Strength	12.4 - 33.8 MPa	1800 - 4900 psi	Average value: 26.1 MPa Grade Count:4
Flexural Modulus	1.00 - 1.20 GPa	145 - 174 ksi	Average value: 1.10 GPa Grade Count:3
Compressive Yield Strength	0.00758 - 6.60 MPa	1.10 - 957 psi	Average value: 1.94 MPa Grade Count:13
Compressive Modulus	0.0000138 - 0.600 GPa	0.00200 - 87.0 ksi	Average value: 0.118 GPa Grade Count:14
Poissons Ratio	0.320	0.320	Average value: 0.320 Grade Count:8

Mechanical Properties	Metric	English	Comments
	0.0180 - 0.115 GPa	2.75 - 16.7 ksi	Average value: 0.0472 GPa Grade Count:9
Shear Strength	0.600 - 4.00 MPa	87.0 - 580 psi	Average value: 1.81 MPa Grade Count:9
Izod Impact, Notched	0.210 - 0.540 J/cm	0.393 - 1.01 ft-lb/in	Average value: 0.375 J/cm Grade Count:3
Compression Set	3.20 - 8.00 %	3.20 - 8.00 %	Average value: 5.08 % Grade Count:5

Thermal Properties	Metric	English	Comments
CTE, linear	35.0 - 90.0 $\mu\text{m/m-}^{\circ}\text{C}$	19.4 - 50.0 $\mu\text{in/in-}^{\circ}\text{F}$	Average value: 45.1 $\mu\text{m/m-}^{\circ}\text{C}$ Grade Count:11
Specific Heat Capacity	1.13 - 1.90 J/g- $^{\circ}\text{C}$	0.270 - 0.454 BTU/lb- $^{\circ}\text{F}$	Average value: 1.57 J/g- $^{\circ}\text{C}$ Grade Count:8
Thermal Conductivity	0.0360 - 0.0432 W/m-K	0.250 - 0.300 BTU-in/hr-ft 2 - $^{\circ}\text{F}$	Average value: 0.0399 W/m-K Grade Count:3
	0.0230 - 0.0420 W/m-K @Temperature 10.0 - 10.0 $^{\circ}\text{C}$	0.160 - 0.291 BTU-in/hr-ft 2 - $^{\circ}\text{F}$ @Temperature 50.0 - 50.0 $^{\circ}\text{F}$	Average value: 0.0311 W/m-K Grade Count:8
Insulation R Value	1.80 - 12.6	1.80 - 12.6	Average value: 5.68 Grade Count:8
Maximum Service Temperature, Air	70.0 - 93.3 $^{\circ}\text{C}$	158 - 200 $^{\circ}\text{F}$	Average value: 75.1 $^{\circ}\text{C}$ Grade Count:14
Minimum Service Temperature, Air	-200 - -26.1 $^{\circ}\text{C}$	-328 - -15.0 $^{\circ}\text{F}$	Average value: -134 $^{\circ}\text{C}$ Grade Count:13

Optical Properties	Metric	English	Comments
Gloss	24.0 - 69.0 % @Temperature 177 - 199 $^{\circ}\text{C}$	24.0 - 69.0 % @Temperature 351 - 390 $^{\circ}\text{F}$	Average value: 46.5 % Grade Count:1

Processing Properties	Metric	English	Comments
Processing Temperature	80.0 - 129 $^{\circ}\text{C}$	176 - 264 $^{\circ}\text{F}$	Average value: 86.1 $^{\circ}\text{C}$ Grade Count:8
Melt Temperature	166 - 188 $^{\circ}\text{C}$	330 - 370 $^{\circ}\text{F}$	Average value: 177 $^{\circ}\text{C}$ Grade Count:3

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