

Overview of materials for Polyvinyl Dichloride (PVDC)

Category : Polymer , Thermoplastic , PVDC , Polyvinyl Dichloride (PVDC)

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polyvinyl Dichloride (PVDC)". 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-Polyvinyl-Dichloride-PVDC.php

Physical Properties	Metric	English	Comments
Density	1.26 - 1.78 g/cc	0.0455 - 0.0643 lb/in ³	Average value: 1.62 g/cc Grade Count:36
Filler Content	30.0 - 60.0 %	30.0 - 60.0 %	Average value: 50.0 % Grade Count:19
Water Absorption	0.130 - 1.80 %	0.130 - 1.80 %	Average value: 0.299 % Grade Count:13
pH	1.20 - 4.00	1.20 - 4.00	Average value: 2.28 Grade Count:5
Water Vapor Transmission	14.0 - 160 g/m ² /day	0.902 - 10.3 g/100 in ² /day	Average value: 50.7 g/m ² /day Grade Count:5
	@Temperature 38.0 - 38.0 °C	@Temperature 100 - 100 °F	
	11.0 - 160 g/m ² /day	0.708 - 10.3 g/100 in ² /day	
Oxygen Transmission	@Temperature 38.0 - 38.0 °C	@Temperature 100 - 100 °F	Average value: 50.7 g/m ² /day Grade Count:9
	11.0 - 160 g/m ² /day	0.708 - 10.3 g/100 in ² /day	
	@Thickness 0.00100 - 0.00100 mm	@Thickness 0.0000394 - 0.0000394 in	
Oxygen Transmission Rate	0.00400 - 0.0470 cc-mm/m ² -24hr-atm	0.0102 - 0.119 cc-mil/100 in ² -24hr-atm	Average value: 0.0219 cc-mm/m ² -24hr-atm Grade Count:10
Linear Mold Shrinkage	40.0 - 1000 cc/m ² /day	2.58 - 64.4 cc/100 in ² /day	Average value: 292 cc/m ² /day Grade Count:6
Surface Tension	0.00100 - 0.00400 cm/cm	0.00100 - 0.00400 in/in	Average value: 0.00204 cm/cm Grade Count:12
	33.0 - 54.0 dynes/cm	33.0 - 54.0 dynes/cm	Average value: 41.6 dynes/cm Grade Count:5

Mechanical Properties	Metric	English	Comments
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Tensile Strength Ultimate Mechanical Properties	14.0 - 280 MPa Metric	2030 - 40600 psi English	Average value: 237 MPa Grade Count:19
Elongation at Break	1.80 - 110 %	1.80 - 110 %	Average value: 8.79 % Grade Count:20
Modulus of Elasticity	1.03 - 24.0 GPa	149 - 3480 ksi	Average value: 18.3 GPa Grade Count:19
Flexural Yield Strength	240 - 400 MPa	34800 - 58000 psi	Average value: 350 MPa Grade Count:13
Flexural Modulus	11.5 - 23.5 GPa	1670 - 3410 ksi	Average value: 18.3 GPa Grade Count:13
Izod Impact, Notched	0.700 - 1.20 J/cm	1.31 - 2.25 ft-lb/in	Average value: 1.03 J/cm Grade Count:10
Izod Impact, Unnotched	4.60 - 11.0 J/cm	8.62 - 20.6 ft-lb/in	Average value: 7.98 J/cm Grade Count:10
Coefficient of Friction	0.210 - 0.350	0.210 - 0.350	Average value: 0.314 Grade Count:8

Thermal Properties	Metric	English	Comments
CTE, linear	14.0 - 18.0 $\mu\text{m}/\text{m}^{\circ}\text{C}$	7.78 - 10.0 $\mu\text{in}/\text{in}^{\circ}\text{F}$	Average value: 15.6 $\mu\text{m}/\text{m}^{\circ}\text{C}$ Grade Count:10
Deflection Temperature at 1.8 MPa (264 psi)	220 - 230 $^{\circ}\text{C}$	428 - 446 $^{\circ}\text{F}$	Average value: 228 $^{\circ}\text{C}$ Grade Count:12
Glass Transition Temp, Tg	7.00 - 16.0 $^{\circ}\text{C}$	44.6 - 60.8 $^{\circ}\text{F}$	Average value: 12.8 $^{\circ}\text{C}$ Grade Count:8
Flammability, UL94	HB - 5VA	HB - 5VA	Grade Count:8
Oxygen Index	25.0 - 37.0 %	25.0 - 37.0 %	Average value: 27.4 % Grade Count:8
Glow Wire Test	775 - 960 $^{\circ}\text{C}$	1430 - 1760 $^{\circ}\text{F}$	Average value: 866 $^{\circ}\text{C}$ Grade Count:3

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	Average value: 1.00e+13 ohm-cm Grade Count:5
Dielectric Constant	3.90 - 4.60	3.90 - 4.60	Average value: 4.33 Grade Count:7
Dielectric Strength	24.0 - 31.0 kV/mm	610 - 787 kV/in	Average value: 27.8 kV/mm Grade Count:6
Dissipation Factor	0.00900 - 0.0120	0.00900 - 0.0120	Average value: 0.0105 Grade Count:5
Comparative Tracking Index	400 - 600 V	400 - 600 V	Average value: 546 V Grade Count:6

Processing Properties	Metric	English	Comments
Nozzle Temperature	260 - 290 $^{\circ}\text{C}$	500 - 554 $^{\circ}\text{F}$	Average value: 275 $^{\circ}\text{C}$ Grade Count:11
Melt Temperature	250 - 290 $^{\circ}\text{C}$	482 - 554 $^{\circ}\text{F}$	Average value: 269 $^{\circ}\text{C}$ Grade Count:19

Processing Properties	Metric	English	Comments
Drying Temperature	80.0 - 120 °C	176 - 248 °F	Average value: 114 °C Grade Count:19

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