

Overview of materials for Cyanoacrylate Adhesive

Category : Polymer , Adhesive , Thermoset , Acrylic/Cyanoacrylate Adhesive

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Cyanoacrylate Adhesive". 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-Cyanoacrylate-Adhesive.php

Physical Properties	Metric	English	Comments
Density	0.875 - 2.24 g/cc	0.0316 - 0.0809 lb/in ³	Average value: 1.11 g/cc Grade Count:307
Volatile Organic Compounds (VOC) Content	144 - 840 g/l	144 - 840 g/l	Average value: 527 g/l Grade Count:32
Particle Size	1.65 - 2.80 µm	1.65 - 2.80 µm	Average value: 2.13 µm Grade Count:3
pH	6.80 - 8.90	6.80 - 8.90	Average value: 8.09 Grade Count:4
Viscosity	0.400 - 1.10e+6 cP	0.400 - 1.10e+6 cP	Average value: 17700 cP Grade Count:373
Thickness	12.7 - 140 microns	0.500 - 5.50 mil	Average value: 63.0 microns Grade Count:24

Mechanical Properties	Metric	English	Comments
Hardness, Barcol	65.0	65.0	Average value: 65.0 Grade Count:13
Hardness, Shore A	72.0 - 85.0	72.0 - 85.0	Average value: 84.0 Grade Count:13
Hardness, Shore D	27.0 - 85.0	27.0 - 85.0	Average value: 72.6 Grade Count:69
Tensile Strength, Ultimate	2.48 - 42.1 MPa	360 - 6100 psi	Average value: 25.2 MPa Grade Count:66
Tensile Strength, Yield	12.4 - 19.3 MPa	1800 - 2800 psi	Average value: 18.0 MPa Grade Count:71
Elongation at Break	2.00 - 340 %	2.00 - 340 %	Average value: 126 % Grade Count:47
Modulus of Elasticity	0.0111 - 2.76 GPa	1.61 - 400 ksi	Average value: 1.23 GPa Grade Count:13
Shear Strength	3.00 - 28.8 MPa	435 - 4180 psi	Average value: 20.3 MPa Grade Count:37
Adhesive Bond Strength	0.690 - 35.0 MPa	100 - 5080 psi	Average value: 15.7 MPa Grade Count:238

Peel Strength Mechanical Properties	0.0219 - 12.0 kN/m Metric	0.125 - 68.5 pli English	Average value: 2.82 kN/m Grade Count:36
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Thermal Properties	Metric	English	Comments
CTE, linear	55.0 - 162 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	30.6 - 90.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	Average value: 87.4 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ Grade Count:106
Thermal Conductivity	0.100 - 1.65 W/m-K	0.694 - 11.5 BTU-in/hr-ft ² -°F	Average value: 0.205 W/m-K Grade Count:97
Melting Point	160 - 170 °C	320 - 338 °F	Average value: 165 °C Grade Count:3
Boiling Point	93.0 - 169 °C	199 - 336 °F	Average value: 131 °C Grade Count:4
Maximum Service Temperature, Air	21.1 - 371 °C	70.0 - 700 °F	Average value: 120 °C Grade Count:340
Softening Point	149 - 155 °C	300 - 311 °F	Average value: 149 °C Grade Count:14
Minimum Service Temperature, Air	-184 - -20.0 °C	-300 - -4.00 °F	Average value: -54.5 °C Grade Count:304
Glass Transition Temp, Tg	-33.0 - 120 °C	-27.4 - 248 °F	Average value: 44.7 °C Grade Count:18
Flash Point	-1.11 - 110 °C	30.0 - 230 °F	Average value: 64.1 °C Grade Count:36

Optical Properties	Metric	English	Comments
Refractive Index	1.38 - 1.49	1.38 - 1.49	Average value: 1.47 Grade Count:17
Transmission, Visible	80.0 - 90.0 %	80.0 - 90.0 %	Average value: 80.2 % Grade Count:50

Electrical Properties	Metric	English	Comments
Electrical Resistivity	2.00e+13 - 1.50e+16 ohm-cm	2.00e+13 - 1.50e+16 ohm-cm	Average value: 3.68e+15 ohm-cm Grade Count:18
	2.50e+12 - 2.50e+12 ohm-cm @Temperature 65.0 - 65.0 °C	2.50e+12 - 2.50e+12 ohm-cm @Temperature 149 - 149 °F	Average value: 2.50e+12 ohm-cm Grade Count:3
Surface Resistance	0.0250 - 1.88e+17 ohm	0.0250 - 1.88e+17 ohm	Average value: 2.14e+16 ohm Grade Count:12
Insulation Resistance	2.50e+14 - 8.00e+14 ohm	2.50e+14 - 8.00e+14 ohm	Average value: 5.90e+14 ohm Grade Count:5
Shielding Effectiveness	57.0 - 85.0 dB	57.0 - 85.0 dB	Average value: 70.9 dB Grade Count:3
Dielectric Constant	2.50 - 4.60	2.50 - 4.60	Average value: 3.41 Grade Count:76
Dielectric Strength	9.84 - 303 kV/mm	250 - 7700 kV/in	Average value: 25.4 kV/mm Grade Count:105

Electrical Properties	Metric	English	Comments
Dielectric Breakdown	1000 - 8400 V	1000 - 8400 V	Average value: 2990 V Grade Count: 7
Dissipation Factor	0.0100 - 0.0200	0.0100 - 0.0200	Average value: 0.0112 Grade Count: 8

Processing Properties	Metric	English	Comments
Processing Temperature	20.0 °C	68.0 °F	Average value: 20.0 °C Grade Count: 30
Cure Time	0.0167 - 43200 min	0.000278 - 720 hour	Average value: 492 min Grade Count: 280
	3.00 - 60.0 min @Temperature 60.0 - 170 °C	0.0500 - 1.00 hour @Temperature 140 - 338 °F	Average value: 25.8 min Grade Count: 12

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