

Permabond 102 Cyanoacrylate, General purpose

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

Material Notes:

PERMABOND® 102 is a low viscosity general purpose cyanoacrylate adhesive suitable for bonding close-fitting components. It is fast setting and suitable for use on plastics, rubber and metals. Cyanoacrylate adhesives are single component adhesives that polymerize rapidly when pressed into a thin film between parts. The moisture adsorbed on the surface initiates the curing of the adhesive. Strong bonds are developed extremely fast and on a great variety of materials. These properties make PERMABOND cyanoacrylates ideal adhesives for high speed production lines. Features & Benefits: Plastic and rubber bonding Applications requiring fast fixturing Ease of use – no mixing or heat cure Bonds most materials 100% reactive, no solvents Information provided by Permabond.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Permabond-102-Cyanoacrylate-General-purpose.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.10 g/cc	1.10 g/cc	Uncured
Viscosity	70 - 90 cP	70 - 90 cP	Uncured
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Storage Temperature	2.00 - 7.00 °C	35.6 - 44.6 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	85	85	ISO 868
Adhesive Bond Strength	>= 5.00 MPa	>= 725 psi	PC, Substrate Failure, Shear
	>= 6.00 MPa	>= 870 psi	ABS, Substrate Failure, Shear
	>= 6.00 MPa	>= 870 psi	PVC, Substrate Failure, Shear
	7.00 - 9.00 MPa	1020 - 1310 psi	Aluminum, Shear
	8.00 - 10.0 MPa	1160 - 1450 psi	Zinc, Shear
	12.0 - 14.0 MPa	1740 - 2030 psi	Phenolic, Shear
	19.0 - 23.0 MPa	2760 - 3340 psi	Steel, Shear; ISO 4587
Impact	3.0 - 5.0	3.0 - 5.0	kJ/m^2 Adhesive Impact Strength; ASTM D950

Thermal Properties	Metric	English	Comments
CTE, linear	90.0 $\mu\text{m/m}^\circ\text{C}$	50.0 $\mu\text{in/in}^\circ\text{F}$	
Thermal Conductivity	0.100 W/m-K	0.694 BTU-in/hr-ft ² -°F	

Maximum Service Temperature, Air Thermal Properties	82.2 °C Metric	180 °F English	Comments
Minimum Service Temperature, Air	-62.2 °C	-80.0 °F	

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.5 @Frequency 10000 Hz	2.5 @Frequency 10000 Hz	
Dielectric Strength	25.0 kV/mm	635 kV/in	

Processing Properties	Metric	English	Comments
Cure Time	0.0833 - 0.167 min	0.00139 - 0.00278 hour	Buna N Rubber, handling time
	0.117 - 0.167 min	0.00194 - 0.00278 hour	PVC, handling time
	0.117 - 0.167 min	0.00194 - 0.00278 hour	ABS, handling time
	0.167 - 0.250 min	0.00278 - 0.00417 hour	Phenolic, handling time
	0.167 - 0.250 min	0.00278 - 0.00417 hour	Steel, handling time
	1440 min	24.0 hour	full strength

Descriptive Properties	Value	Comments
Appearance	Colorless	Uncured
Maximum Gap Fill (mm)	0.15	
Strength Retention	10% at 150°C	Relative to 0°C
	100% at 0°C	Relative to 0°C
	30% at 100°C	Relative to 0°C
	55% at -50°C	Relative to 0°C
	90% at 50°C	Relative to 0°C

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