

Permabond HM165 Anaerobic Retainer

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

Material Notes:

Permabond® HM165 is a high viscosity anaerobic retaining compound that cures when confined between metal parts to form a tough bond. It is best suited for cylindrical parts and where high temperature resistance is required. The high viscosity and thixotropic effect of the material allows for larger tolerances. Features & Benefits: Very high strength Easy to apply Improved fatigue life Excellent chemical resistance High temperature resistance Information provided by Permabond.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Permabond-HM165-Anaerobic-Retainer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.10 g/cc	1.10 g/cc	Uncured
Viscosity	10000 cP	10000 cP	at 20 rpm vibration
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	25000 cP	25000 cP	at 2 rpm vibration
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Storage Temperature	5.00 - 25.0 °C	41.0 - 77.0 °F	

Mechanical Properties	Metric	English	Comments
Adhesive Bond Strength	20.0 MPa	2900 psi	steel collar and pin shear; ISO 10123

Thermal Properties	Metric	English	Comments
CTE, linear	90.0 µm/m-°C	50.0 µin/in-°F	
Thermal Conductivity	0.190 W/m-K	1.32 BTU-in/hr-ft²-°F	
Maximum Service Temperature, Air	229 °C	445 °F	
Minimum Service Temperature, Air	-53.9 °C	-65.0 °F	

Electrical Properties	Metric	English	Comments
Dielectric Strength	11.0 kV/mm	279 kV/in	

Processing Properties	Metric	English	Comments
Cure Time	4.98 min	0.0830 hour	Brass, handling strength
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	15.0 - 19.8 min	0.250 - 0.330 hour	

Processing Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	M10 steel handling strength Comments
	30.0 min @ Temperature 23.0 °C	0.500 hour @ Temperature 73.4 °F	Brass, working strength
	60.0 min @ Temperature 23.0 °C	1.00 hour @ Temperature 73.4 °F	Zinc, handling strength
	180 - 360 min @ Temperature 23.0 °C	3.00 - 6.00 hour @ Temperature 73.4 °F	M10 steel, working strength
	360 min @ Temperature 23.0 °C	6.00 hour @ Temperature 73.4 °F	Stainless steel, handling strength
	1440 min @ Temperature 23.0 °C	24.0 hour @ Temperature 73.4 °F	Zinc, working strength
	1440 min @ Temperature 23.0 °C	24.0 hour @ Temperature 73.4 °F	M10 steel, full strength

Descriptive Properties	Value	Comments
Appearance	Green	Uncured
Maximum Gap Fill (mm)	0.3	
Strength Retention	50% at 150°C	Relative to 0°C
	80% at 100°C	Relative to 0°C
	93% at 50°C	Relative to 0°C
Torque Strength (N m)	35	M10 steel, break
	50	M10 steel, prevail
UV Fluorescence	Yes	Uncured

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