Permabond HL138 Anaerobic Retaining Compound

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

Material Notes:

Permabond® HL138 is a single component liquid that cures only when in contact with metal parts and oxygen is excluded. The liquid adhesive fills the "air space" between parts and upon cure which eliminates wear, erosion, and pitting. Permabond HL138 cures to a tough cross-linked plastic and provides excellent environmental and temperature resistance. Since Permabond® HL138 can fill up the inner space, shaft-hub assemblies can be made with a clearance fit and eliminates an expensive press fit, while actually increasing the push out force. Permabond® HL138 develops full strength in a few hours on a large variety of substrates and is used on high speed production lines. Features & Benefits: Simple one-part fast cure low viscosity system Excellent shear strength Good environmental resistance Information provided by Permabond.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Permabond-HL138-Anaerobic-Retaining-Compound.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.10 g/cc	1.10 g/cc	Uncured
Viscosity	150 - 300 cP @Temperature 25.0 °C	150 - 300 cP @Temperature 77.0 °F	Uncured
Storage Temperature	5.00 - 25.0 °C	41.0 - 77.0 °F	

Mechanical Properties	Metric	English	Comments
Adhesive Bond Strength	16.0 MPa	2320 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	149 °C	300 °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 @Temperature 23.0 °C	0.0830 hour @Temperature 73.4 °F	Zinc, handling strength

Processing Properties	Metric	English	Comments
	10.2 min @Temperature 23.0 °C	0.170 hour @Temperature 73.4 °F	Aluminum, handling strength
	15.0 min @Temperature 23.0 °C	0.250 hour @Temperature 73.4 °F	Zinc, working strength
	15.0 min @Temperature 23.0 °C	0.250 hour @Temperature 73.4 °F	Aluminum, handling strength
	180 min @Temperature 23.0 °C	3.00 hour @Temperature 73.4 °F	M10 steel, working strength
	1440 min @Temperature 23.0 °C	24.0 hour @Temperature 73.4 °F	M10 steel, full strength
	1440 min @Temperature 23.0 °C	24.0 hour @Temperature 73.4 °F	Aluminum, working strength

Descriptive Properties	Value	Comments
Appearance	Green	Uncured
Maximum Gap Fill (mm)	0.127	
Maximum Thread Size	M20	
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)	20	M10 steel, break
	36	M10 steel, prevail
UV Fluorescence	No	Uncured

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