

Permabond HM161 Anaerobic Retaining Compound

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

Material Notes:

Permabond® HM161 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 unitizes and retains the mated parts. Thus it prevents their movement relative to each other, eliminating wear, erosion and pitting. HM161 cures to a tough cross-linked plastic that will prevent the corrosion of mated parts and provides excellent environmental and temperature resistance. Features & Benefits: Speeds up production Improves alignment Strengthens joint Simple one-part system Excellent shear strength Good environmental resistance Information provided by Permabond.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Permabond-HM161-Anaerobic-Retaining-Compound.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.10 g/cc	1.10 g/cc	Uncured
Viscosity	2000 cP @Temperature 25.0 °C	2000 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	24.0 MPa	3480 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	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	177 °C	350 °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	Brass, handling strength
	10.2 min @Temperature 23.0 °C	0.170 hour @Temperature 73.4 °F	M10 steel, handling strength

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

Descriptive Properties	Value	Comments
Appearance	Green	Uncured
Maximum Gap Fill (mm)	0.25	
Maximum Thread Size	M30	
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)	31	M10 steel, break
	45	M10 steel, prevail
UV Fluorescence	Yes	Uncured

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