

## Permabond HM160 Anaerobic Retaining Compound

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

### Material Notes:

Permabond® HM160 is a medium viscosity liquid adhesive that cures when confined between metal parts to form a tough, hard plastic. In the uncured, liquid state, the adhesive wets the metal surfaces, keying into all surface irregularities and fills the space between the mated parts. The anaerobic curing mechanism delays the cure to allow for proper assembly and alignment. Once cured, the anaerobic adhesive fills the space between the parts preventing loosening from vibration or thermal expansion. When cured, the HM160 seals the joint against attack by harsh environments. Features & Benefits: Reduces cost by allowing the use of lighter press fits Speeds production by utilizing easier to assemble tolerances Prolongs bearing life by reducing stress caused by press fits Improves alignment by filling space between bearing rings and housings Keeps machinery on line by dressing worn parts Strengthens the joint by augmenting the press fit used to assure concentricity of the shafts and bearings Prevents corrosion between mated parts by excluding air and moisture from the joint Prevents loosening caused by vibration and thermal expansion Information provided by Permabond.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Permabond-HM160-Anaerobic-Retaining-Compound.php](http://www.lookpolymers.com/polymer_Permabond-HM160-Anaerobic-Retaining-Compound.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.10 g/cc	1.10 g/cc	Uncured
Viscosity	600 cP @Temperature 25.0 °C	600 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	14.0 MPa	2030 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 <sup>2</sup> -°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
	4.98 min	0.0830 hour	

<b>Cure Time</b> Processing Properties	<b>Metric</b> @ Temperature 23.0 °C	<b>English</b> @ Temperature 73.4 °F	<b>Brass, handling strength</b> Comments
	15.0 min	0.250 hour	Zinc, handling strength
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	15.0 min	0.250 hour	M10 steel, handling strength
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	30.0 min	0.500 hour	Brass, working strength
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	60.0 min	1.00 hour	M10 steel, working strength
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	180 - 360 min	3.00 - 6.00 hour	Zinc, working strength
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	360 min	6.00 hour	Stainless steel, handling 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	

<b>Descriptive Properties</b>	<b>Value</b>	<b>Comments</b>
Appearance	Green	Uncured
Maximum Gap Fill (mm)	0.2	
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)	30	M10 steel, break
	80	M10 steel, prevail
UV Fluorescence	Yes	Uncured

## Contact Songhan Plastic Technology Co.,Ltd.

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