PERMABOND MM070

Anaerobic Threadlocker

Provisional Technical Datasheet

Features & Benefits

- Non-hazardous
- Vibration resistant
- Lubricates threads for easier assembly
- Provides corrosion protection

Description

Permabond MM070 is an anaerobic adhesive designed to lock and seal metal parts that subsequently may need to be dismantled for maintenance. The high vibration resistance makes Permabond MM070 is particularly suited to replacing lock washers, split pins and other mechanical locking devices. It is ideal for workplaces and factories which require a "white" MSDS i.e. no need for COSHH assessment.

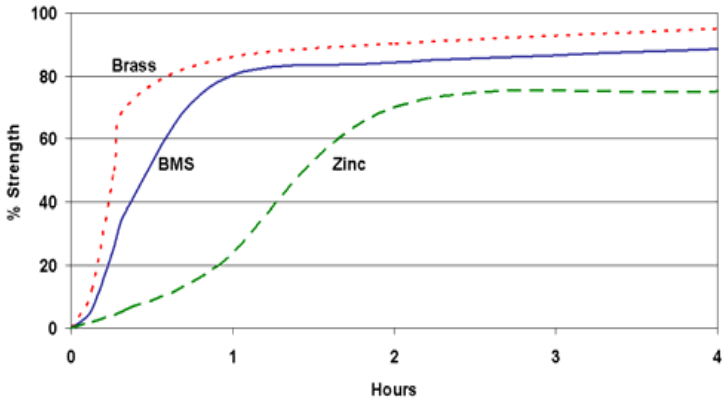
Physical Properties of Uncured Adhesive

Chemical composition	Acrylic
Appearance	Blue
Viscosity @ 25°C	20 rpm: 2000-3000 mPa.s (cP) 2 rpm: 5000-6000 mPa.s (cP)
Density	1.08
UV fluorescence	Yes

Typical Curing Properties

Maximum gap fill Maximum thread size	0.12 mm ***0.005 in*** M20 ¾"
Handling strength	25 minutes (steel) 30 minutes (zinc)
Working strength	1-2 hours
Full strength	24 hours

**Handling time at 23°C / 73°F.*



steel will tend towards the slower curve. Lower temperatures or large gaps will tend to extend the cure time. To reduce the cure time the use of Permabond A905, ASC10, or heat can be considered.

Typical Performance of Cured Adhesive

Torque strength (M10 steel ISO10964)	Break 20 Nm ***175 in.lb*** Prevail 12 Nm ***100 in.lb***
Coefficient of thermal expansion	90 x 10^{-6} mm/mm/°C
Dielectric strength	11 kV/mm

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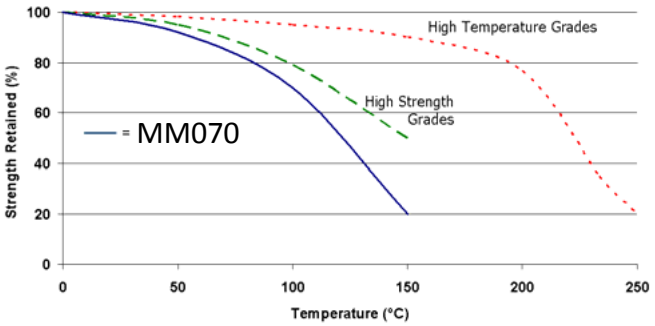
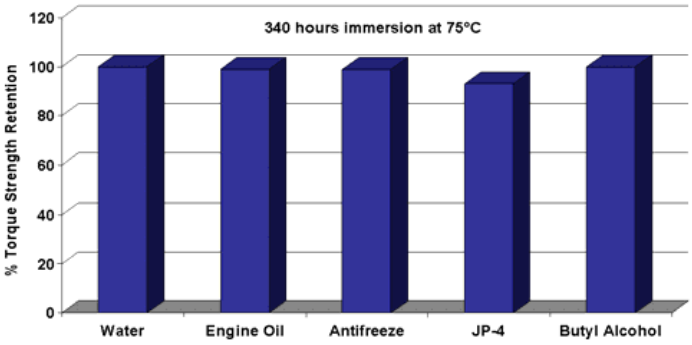
Temperature Resistance



"Hot strength" shear strength tests performed on mild steel. 24hr cure at room temperature and conditioned to pull temperature for 30 minutes before testing.

MM070 can withstand higher temperatures for brief periods (such as for paint baking and wave soldering processes) providing the joint is not unduly stressed. The minimum temperature the cured adhesive can be exposed to is -55°C (-65°F) depending on the materials being bonded.

Chemical Resistance



This product is not recommended for use in contact with steam, strong oxidizing materials and polar solvents although will withstand a solvent wash without any bond strength deterioration.

Surface Preparation

Though the anaerobic adhesives will tolerate a slight degree of surface contamination, best results are obtained on clean, dry and grease free surfaces. The use of a suitable solvent-based cleaner (such as acetone or isopropanol) is recommended.
In general, roughened surfaces (~25µm) give higher bond strengths than polished or ground surfaces.
To reduce the curing time, especially on inactive surfaces (such as zinc, aluminium and stainless steel), the use of Permabond A905 or ASC10 can be considered.

Directions for Use

1) Prevent the tip from touching metal surfaces during application.
2) When working with through holes, dispense a bead of material across the contact length of the threads.
3) When working with blind holes, apply several drops down the threads to the bottom of the hole.
4) Assemble and torque the parts as necessary.
5) Replace lid to bottle to avoid contamination of remaining liquid adhesive.

Storage & Handling

Storage Temperature	5 to 25°C ***(41 to 77°F)***
Users are reminded that all materials, whether innocuous or not, should be handled in accordance with the principles of good industrial hygiene. Full information can be obtained from the Material Safety Data Sheet.	

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