

Features & Benefits

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

Description

Permabond MH072 is an anaerobic adhesive designed to seal threaded pipe work connections. MH072 seals against gas, water, LPG, hydrocarbons, oils and other chemicals. Unlike PTFE tape or hemp, Permabond MH072 will not shred or dry out, so it will provide a durable seal, helping to extend the life of the components. It is ideal for workplaces and factories which require a "white" MSDS i.e. no need for COSHH assessment.

Physical Properties of Uncured Adhesive

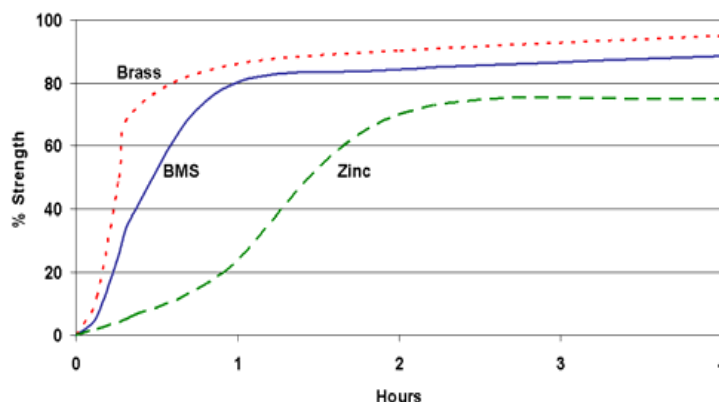
Chemical composition	Acrylic
Appearance	Yellow
Viscosity @ 25°C	20 rpm: 25,000 mPa.s (cP) 2 rpm: 65,000 mPa.s (cP)
Density	1.08
UV fluorescence	Yes

Typical Curing Properties

Maximum gap fill	0.5 mm 0.02 in
Maximum thread size	M56 2 in
Handling strength	30 minutes (steel) 45 minutes (zinc)
Working strength	2-4 hours
Full strength	24 hours

*Handling time at 23°C / 73°F.

Strength Development



Cure times are typical at 23°C. Copper and its alloys will follow the faster cure while oxidised or passivated surfaces like stainless 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.

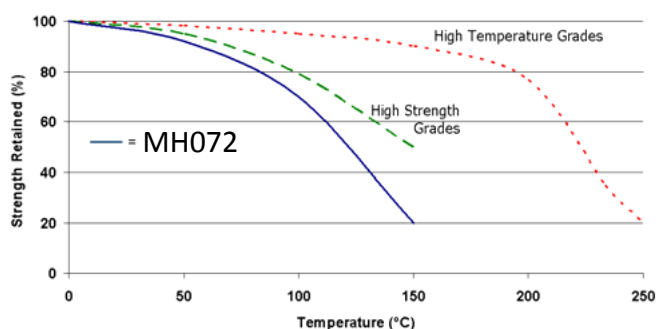
Typical Performance of Cured Adhesive

Torque strength (M10 steel ISO10964)	Break 18 Nm 160 in.lb Prevail 8 Nm 700 in.lb
Coefficient of thermal expansion	90×10^{-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.

MH075 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

Immersion (1,000 Hours)	Temperature (°C)	Strength Retention (%)
Engine Oil	125	100
Water/Glycol	85	90
Unleaded Petrol	23	100
Brake Fluid	23	95
99% IMS	23	95
Acetone	23	65

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) Apply a continuous bead circumferentially 1-2 threads from the leading edge.
- 2) Ensure sufficient is applied to give a complete seal.
- 3) For taper/parallel threads ensure adhesive is positioned where the threads will engage fully. Gaps, and therefore cure times, may be greater than expected with this joint configuration.
- 4) Tighten with normal tools.

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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