

## Features & Benefits

- Non-aggressive – will not attack CPVC
- Easy to use and apply
- Directional freedom
- Uncured material fully dissolves in water
- Does not contain solvents
- Excellent chemical and temperature resistance
- Cures at room temperature
- Will not shred, tear or cause blockages

## Description

Permabond LH056 is a pipe sealant designed for use in sealing metal pipes in sprinkler systems which may also contain CPVC piping. Permabond LH056 forms an instant seal and once fully cured the seal will generally surpass the burst rating of the pipe. Permabond Pipe Sealants use anaerobic technology to prevent leaks in sprinkler systems. Used in fabrication and installation, Permabond Pipe Sealants replace pipe dope and sealing tapes with a complete and reliable seal even if pipes are not completely seated. They prevent corrosion and lock against vibration loosening. They do not remain a paste, like pipe dope, but cure to a solid plastic seal. Cure is initiated by the presence of metal and the absence of air.

Permabond LH056 is listed on the Spears® FlameGuard® CPVC Fire Sprinkler Products Liability Warranty Approved Products List

Permabond LH056 is FBC™ System Compatible\*  
FBC™ System Compatible indicates that this product has been tested, and is monitored on an ongoing basis, to assure its chemical compatibility with FlowGuard Gold®, BlazeMaster® and Corzan® pipe and fittings. FBC, FlowGuard Gold, BlazeMaster and Corzan are licensed trademarks of The Lubrizol Corporation.

## Physical Properties of Uncured Adhesive

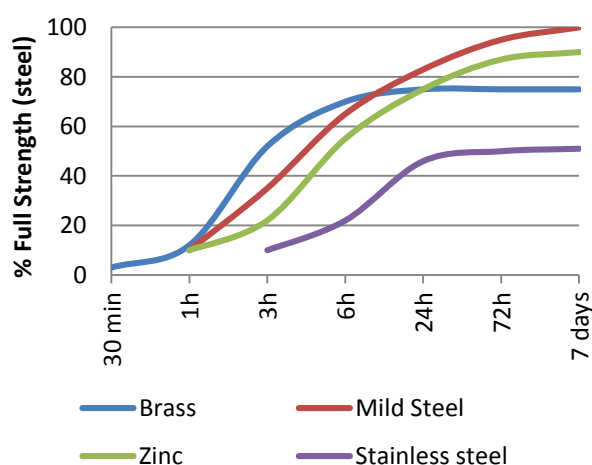
Chemical composition	Methacrylate esters
Appearance	White
Viscosity @ 25°C (Helipath)	20rpm: 50,000 – 100,000 mPa.s (cP) 2rpm: 300,000 – 500,000 mPa.s (cP)
Specific Gravity	1.1
Particle size	<10µm
UV fluorescence	No

## Typical Curing Properties

Maximum gap fill	0.5 mm <b>0.02 in</b>
Time taken to reach handling strength (M10) @23°C	Black iron: 1-2 hours* Brass: <1 hour
Full strength (M10 steel) @23°C	24 hours

\*Copper and its alloys will make the adhesive cure more quickly, while oxidized or passivated surfaces (like stainless steel) will reduce cure speed. To reduce curing time, use Permabond activator A905 or ASC10. Alternatively, increasing the curing temperature will reduce curing time.

## Strength Development



\*Cure times are typical at 23°C. Copper and its alloys will follow the faster cure while oxidized 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.

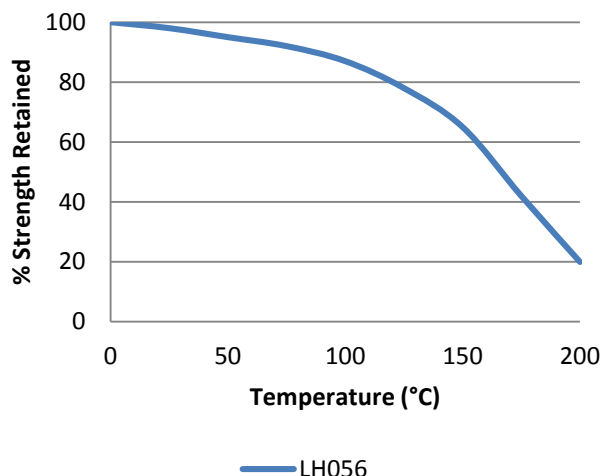
## Typical Performance of Cured Adhesive

Torque strength (M10 steel ISO10964)	Break >4 N·m <b>&gt;35 in.lb</b> Prevail >3 N·m <b>&gt;25 in.lb</b>
Compressive shear strength (steel collar & pin ISO10123)	7 MPa <b>1000 psi</b>
Coefficient of thermal expansion	90 x 10 <sup>-6</sup> mm/mm/°K
Coefficient of thermal conductivity	0.19 W/(m.K)

The information given and the recommendations made herein are based on our research and are believed to be accurate but no guarantee of their accuracy is made. In every case we urge and recommend that purchasers before using any product in full-scale production make their own tests to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purpose under their own operating conditions. THE PRODUCTS DISCLOSED HEREIN ARE SOLD WITHOUT ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED.

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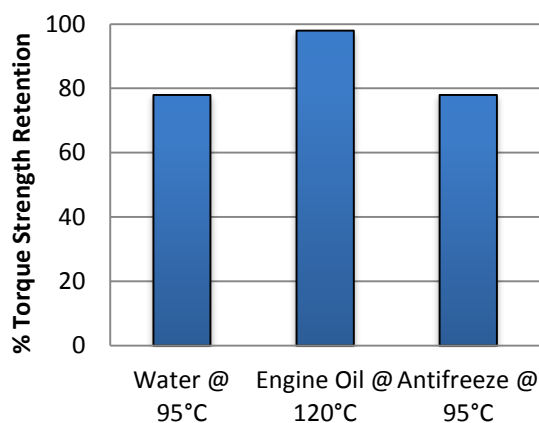
## Hot Strength



*"Hot strength" Breakaway strength on M10 Zinc plated bolts according to ISO 10964. Cured at 23°C for 24 hours then conditioned for 30 minutes at testing temperature.*

LH056 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 oxygen, oxygen rich systems and other strong oxidizing materials. This product may adversely affect some thermoplastics and users must check compatibility of the product with such substrates before using.*

## 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. To reduce the curing time, especially on inactive surfaces (such as zinc, aluminum and stainless steel), the use of Permabond® A905 or ASC10 can be considered.

## Directions for Use

1. Apply the sealant 360° around leading threads of the male fitting leaving the first thread free of sealant.
2. Force the material into all the voids. Adjust amount of sealant according to the size of the fitting. For large diameter pipe, sealant may have to be applied to the female threads also to insure complete coverage.
3. Assemble and tighten the fittings until proper alignment is obtained. Visually check for a small bead of sealant around the entire circumference of the pipe.
4. A seal to moderate pressure is obtained immediately on properly tightened fittings. Allow the sealant to cure for at least 24 hours to obtain maximum pressure and chemical resistance.

*Permabond® LH056 is designed for use on threaded metallic pipe joints; not recommended for use on plastic components.*

## 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 Safety Data Sheet.	

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