

### Features & Benefits

- Full cure seal to the burst rating of pipe
- Easy to use and apply
- Directional freedom
- Does not contain solvents
- Excellent chemical and temperature resistance
- Cures at room temperature
- Will not shred, tear or cause blockages

### Description

Permabond® LH150 Pipe Sealant with PTFE is designed for sealing and locking tapered metal pipe threads and fittings. It is ideal for stainless steel and other passive metals. Instant sealing of up to 1000 psi is achieved upon limited hand tightening. After cure, the sealing capability is up to the burst rating on the typical pipe. The low locking strength allows easy disassembly.

#### UL Classification:

Permabond LH150 is classified by Underwriters Laboratories Inc.® for use in devices handling gasoline, petroleum oils, and natural gas (pressure not over 100 psig) propane and butane not exceeding 2 in. 66G9.

### Physical Properties of Uncured Adhesive

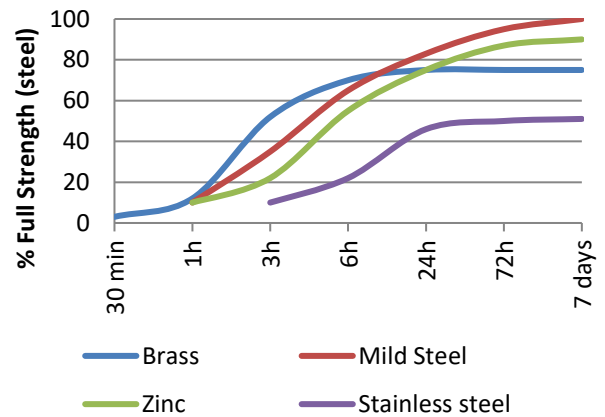
|                      |                     |
|----------------------|---------------------|
| Chemical composition | Methacrylate esters |
| Appearance           | White               |
| Viscosity @ 25°C     | 260,000 mPa.s (cP)  |
| Specific Gravity     | 1.1                 |
| Particle Size        | <10µm               |

### Typical Curing Properties

|   |  |
|---|--|
| Maximum gap fill  | 0.5 mm <b>0.02 in</b>  |
| Time taken to reach handling strength (M10 steel) @23°C | 2 hours*   |
| Full strength (M10 steel) @23°C                         | 24 hours   |
| Instant air pressure seal                               | 1,000 psi (hand assembled)<br>3,000 psi (10 in-lb on torque) |

\*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 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.

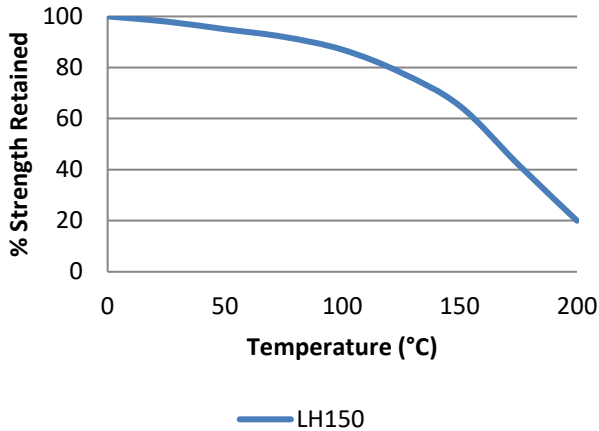
### Typical Performance of Cured Adhesive

|  |  |
|--|--|
| Torque strength (M10 steel ISO10964)         | Break 6 N·m <b>50 in.lb</b><br>Prevail 3 N·m <b>25 in.lb</b> |
| 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                               |
| 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.*

LH150 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

| 1000 Hour immersion                 | Temperature, °C (°F) | Pressure, psi | Results |
|-------------------------------------|----------------------|---------------|---------|
| 50% Antifreeze / 50% water solution | 126 (260)            | 60            | No leak |
| Brake fluid                         | 150 (300)            | 60            | No leak |
| Differential lube                   | 150 (300)            | 60            | No leak |
| 5W/30 Engine oil                    | 150 (300)            | 60            | No leak |
| Transmission fluid                  | 150 (300)            | 60            | No leak |
| Diesel fuel #2                      | 25 (77)              | 60            | No leak |
| ASTM fuel C                         | 25 (77)              | 60            | No leak |
| Water, steam                        | 198 (390)            | 60            | No leak |
| Air                                 | 150 (300)            | 60            | No leak |

***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, 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) Apply Permabond® LH150 onto the leading 3-4 threads half way around the male pipe for pipes up to 1½ inches in diameter. For larger pipes, apply completely around the pipe.
- 3) Screw fittings together. Permabond pipe sealants will seal even when the direction the pipe must face does not allow the complete seating of the threads.
- 4) Visually inspect for a bead of pipe sealant around the entire pipe. If the sealant isn't visible around the circumference, repeat the steps above using more sealant.

***Permabond®LH150 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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