

Features & Benefits

- Flexible
- Replaces all sizes of formed gaskets
- Ideal for bonding dissimilar metals
- Suitable for use with non ferrous metals
- Can be dismantled with normal tools

Description

PERMABOND LH197 is an anaerobic material designed for making “formed in situ” gaskets between metal surfaces. It is highly flexible, making it ideal for dissimilar surfaces where differential thermal expansion and contraction could be an issue. Due to its flexibility it is easy to remove and ideal for gasketing applications where routine disassembly is required or on soft metal surfaces such as certain aluminium alloys which damage easily.

Physical Properties of Uncured Adhesive

Chemical composition	Acrylic
Appearance	Green
Viscosity @ 25°C	37,000 mPa.s (cP) Thixotropic
Density	1.1
UV fluorescence	Yes

Typical Curing Properties

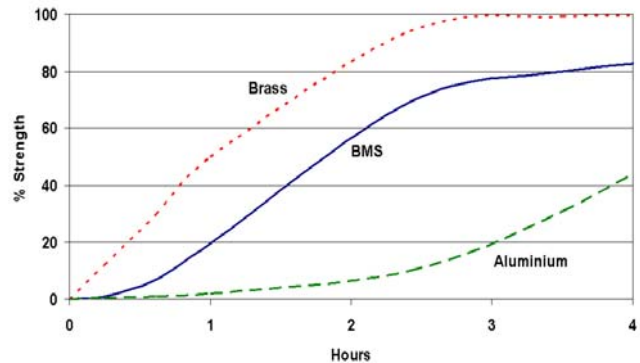
Maximum gap fill	0.3 mm 0.012 in
Maximum thread size	
Handling strength (steel)	20 minutes
Working strength	3-6 hours
Full strength	24 hours

**Handling time at 23°C / 73°F. Copper and its alloys will make the adhesive cure more quickly, while oxidised or passivated surfaces (like stainless steel) will reduce cure speed. To reduce curing time, use Permabond activator A905 or ASC10.*

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Strength Development

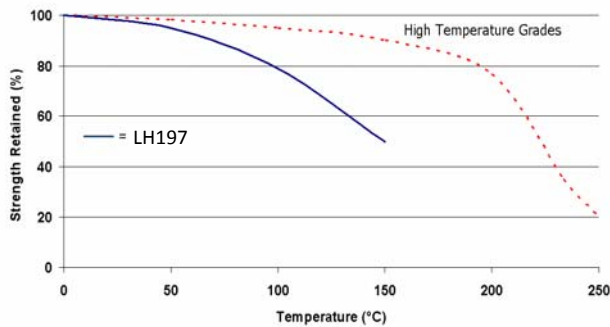


Cure times are typical at 23°C. Copper and its alloys will follow the faster cure while oxidised or passivated surfaces like stainless steel will tend towards the slower curve. Lower temperatures or large gaps will tend to extend the cure time. To reduce the cure time the use of Permabond A905, ASC10, or heat can be considered.

Typical Performance of Cured Adhesive

Shear strength (steel collar & pin)	5 MPa 750 psi
Coefficient of thermal expansion	90 x 10 ⁻⁶ mm/mm/°C
Dielectric strength	11 kV/mm
Thermal conductivity	0.19 W/(m.K)

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.

LH197 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	100
Petrol	23	70

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 as a bead, by roller, silkscreen or stencil. Ensure all potential leak paths such as flange bolt holes are encircled.
- 2) Removal: use normal tools to prise the surfaces apart.
- 3) Ensure old adhesive is removed before reassembling the parts.

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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