PERMABOND® LH197

Anaerobic Gasketmaker

Technical Datasheet

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

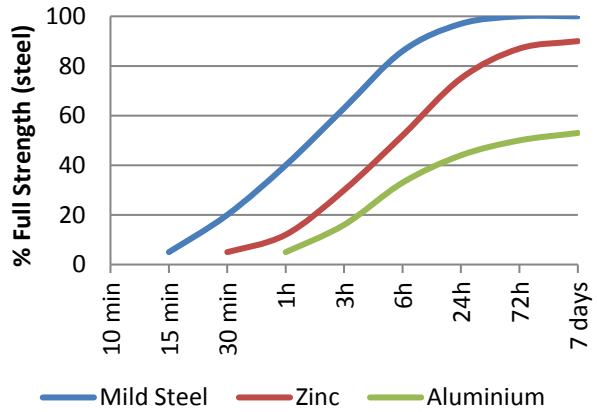
Chemical composition	Acrylic
Appearance	Green
Viscosity @ 25°C	2rpm: 50,000 mPa.s *(cP)* 20rpm: 20,500 mPa.s *(cP)*
Specific Gravity	1.1
UV fluorescence	Yes

Typical Curing Properties

Maximum gap fill	0.3 mm *0.012 in*
Time taken to reach handling strength (M10 steel) @23°C	20 minutes*
Time taken to reach working strength (M10 steel) @23°C	3-6 hours
Full strength (M10 steel) @23°C	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 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 10 N·m *90 in.lb* Prevail 5 N·m *45 in.lb*
Shear strength (steel collar & pin ISO10123)	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)

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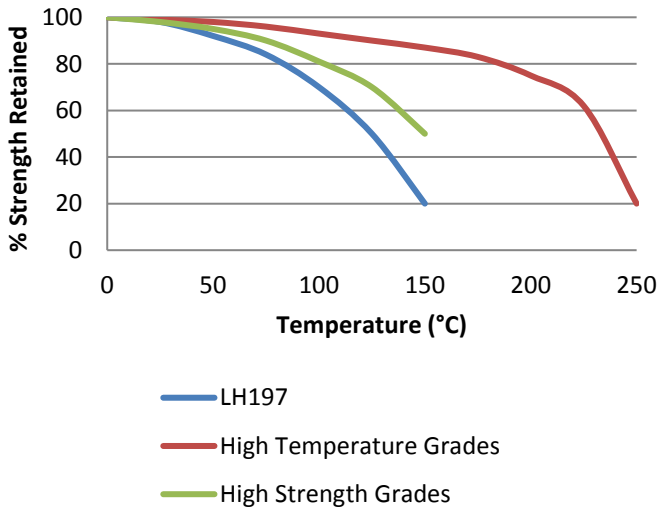
Hot Strength



"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.

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 (1000 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 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.

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 lever the surfaces apart.
3) Ensure old adhesive is removed before reassembling the parts.

Video Link

Gasketmaker directions for use:
https://youtu.be/BwrmjKFeSbc

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.

This Technical Datasheet (TDS) offers guideline information and does not constitute a specification.

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