

Marine Adhesives

Permabond offers a range of adhesive technologies suitable for use in shipbuilding, repair and maintenance.

Application: Gearbox overhaul



Permabond adhesives are ideal for bonding gears to shafts, repairing and replacing spun bearings, bonding bushings and sealing and gasketing gear box housings.

Benefits of Permabond anaerobic sealants:

- Available in a range of viscosities to suit component size, diameter and fit
- Help prevent metal fretting
- Machining tolerances can be relaxed (no more interference or shrink fits)
- Help lubricate parts making the assembly process much easier
- Permabond gasketmakers are ideal for making a whole variety of different shaped gaskets - one bottle can seal all.
- Excellent resistance to water, oil, petrol and other chemicals.
- High temperature resistant products also available.

Adhesive used:

Permabond A1046 or MM15

for bearings & gears to shaft and

Permabond MH196 for gasketing.



GASKETING



THREADLOCKING



THREAD SEALING



RETAINING



BONDING



Application: Reinforcing Superstructure

Structural grade adhesives and metal plates are used to strengthen areas with stress cracks resulting from environmental and operational conditions.

- High viscosity, high strength adhesive with good adhesion
- Easy to apply, good gap fill
- Rapid cure speed ideal for plates that cannot be clamped in place during cure
- Resistant to salt spray
- High shear and peel strength cope very well with high stresses encountered in stormy weather conditions.



Adhesive used:

Permabond TA4300 or TA4810

Application: Rudder bushing repair

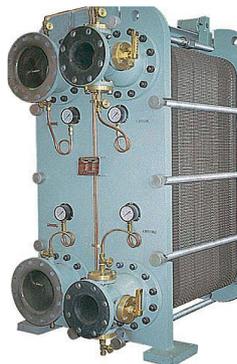


Adhesives are very good alternatives to welding or brazing. Gap filling and strong bonds in one step allows for relaxed tolerances of machined parts.

- Excellent resistance to salt water
- 100% seal prevents corrosion
- Much easier than welding

Adhesive used: *Permabond A134 or HM165*

Application: Flange sealing - ship heat exchanger



Sealing flanges and bolt holes on a ship's heat exchanger.

- Excellent resistance to coolant fluid
- 100% seal prevents leaking
- No bedding in (unlike pre-formed gaskets) so less routine maintenance required.
- High temperature resistance - up to 200°C

Adhesive used: *Permabond MH196*

Permabond[®]
Engineering Adhesives

Product selector

Features	Typical Applications	Cure method	Viscosity (mPa.s) cP	Gap fill (mm) in	Max. shear strength steel (MPa) psi	Temperature range (°C) °F	
Permabond A1042 Removable anaerobic threadlocker - prevents vibration loosening, corrosion, leakage	Threadlocking and sealing hydraulics	Anaerobic cure	8,000	(0.12) 0.005	(12) 1700	(-55 to +150) -65 to +300	Europe, Middle East, Australia
Permabond MM115 Removable anaerobic threadlocker - prevents vibration loosening, corrosion, leakage	Threadlocking	Anaerobic cure	1,300	(0.15) 0.006	(10) 1500	(-55 to +150) -65 to +300	Americas & Asia
Permabond LM012 Hydraulic grade - no fillers	Sealing hydraulic connections	Anaerobic cure	2,000	(0.2) 0.008	(5) 750	(-54 to +177) -65 to +350	Americas & Asia
Permabond HM129 Permanent anaerobic threadlocker - can be used on oily / contaminated parts	Threadlocking nuts and bolts	Anaerobic cure	500	(0.15) 0.006	(17) 2500	(-55 to +150) -65 to +300	Worldwide
Permabond MH196 High viscosity anaerobic sealant for making formed-in-situ gaskets and for sealing flanges and bolt holes	Gasketing and flange sealing	Anaerobic cure	150,000	(0.5) 0.02	(10) 1500	(-55 to +200) -65 to +390	Worldwide
Permabond A131 Thread sealant - suitable for sealing fuel, water, sprinkler and heating pipework	Thread sealing	Anaerobic cure	40,000	(0.5) 0.02	(6) 900	(-55 to +150) -65 to +300	Europe, Middle East, Australia
Permabond LH050 Thread sealant - suitable for sealing fuel, water, sprinkler and heating pipework	Thread sealing	Anaerobic cure	250,000	(0.5) 0.02	(7) 1,000	(-54 to +177) -65 to +350	Americas & Asia
Permabond A1046 Toughened, rapid curing high strength retaining adhesive	Bonding gears to shafts, bearings into housings. Also ideal for sealing air conditioning refrigerant pipework	Anaerobic cure	9,000	(0.25) 0.01	(25) 3600	(-55 to +150) -65 to +300	Europe, Middle East, Australia
Permabond HM165 Toughened, rapid curing high strength retaining adhesive	Bonding gears to shafts, bearings into housings. Also ideal for sealing air conditioning refrigerant pipework	Anaerobic cure	10,000	(0.3) 0.012	(26) 3800	(-54 to +230) -65 to +445	Worldwide
Permabond A134 High viscosity retaining adhesive, suitable for bonding larger parts	Bonding gears to shafts, bearings into housings	Anaerobic cure	70,000	(0.5) 0.02	(21) 3000	(-55 to +150) -65 to +300	Europe, Middle East, Australia
Permabond 2011 General purpose instant bonding gel	Repairing interior trim, bonding rubber mat edges to prevent trip hazards	Moisture cure	Gel	(0.5) 0.02	(24) 3500	(-55 to +80) -65 to +175	Worldwide
Permabond TA4300 Adhesive for structural bonding	Repair of ship's superstructure - metal bonding	Resin & hardener (room temperature cure)	Paste	(2) 0.08	(22) 3200	(-55 to +120) -65 to +250	Europe, Middle East, Australia
Permabond TA4810 Adhesive for structural bonding	Repair of ship's superstructure - metal bonding	Resin & hardener (room temperature cure)	95,000	(2) 0.08	(31) 4500	(-55 to +120) -65 to +250	Americas & Asia
Permabond ET538 2-part epoxy for bonding of wood, fibre-glass, composites, metal etc. Excellent salt water resistance.	Hull, mast and deck construction & repair. Filling gaps and cracks.	Resin & hardener (room temperature cure)	Paste	(5) 0.2	(20) 2900	(-55 to +80) -65 to +175	Worldwide

If you can't see the exact product you are looking for, or need more in depth technical information, Permabond's technical team would be more than happy to help.

Contact US

The experienced team of Permabond chemists is on hand to help you with custom formulations and fulfilling your technical data requests.



Permabond's sales engineers are available to assess your production line and find the best possible turnkey adhesive solution that will result in production efficiencies.

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Permabond Worldwide

Wherever your manufacturing or R&D site may be located, Permabond representatives can be called upon to assist you. We have an extensive network of trained distributors worldwide.

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