PERMABOND A126

Anaerobic Retainer

Technical Datasheet

Features & Benefits

- Vibration resistant
- Can be applied post-assembly
- Improved fatigue life
- Seals porosity in welds and castings
- WRAS approval for drinking water

Description

Permabond A126 is a high-strength anaerobic adhesive for permanent assembly of coaxial assemblies or threaded metal components. The exceptionally low viscosity of this product makes it ideal for use on tight fitting components or where the adhesive needs to be applied after assembly. In addition it may also be used to seal porosity in welds or castings.

Physical Properties of Uncured Adhesive

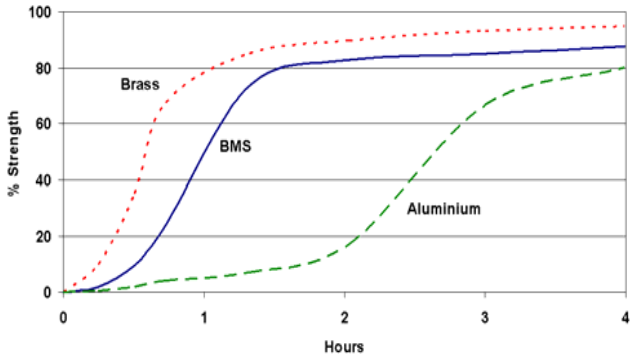
Chemical composition	Acrylic
Appearance	Green
Viscosity @ 25°C	30 mPa.s (cP)
Density	1.07
UV fluorescence	Yes

Typical Curing Properties

Maximum gap fill Maximum thread size	0.05 mm ***0.001 in*** M10 ½"
Handling strength (steel)	15 minutes
Working strength	1 hour
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. Alternatively, increasing the curing temperature will reduce curing time.*

Strength Development

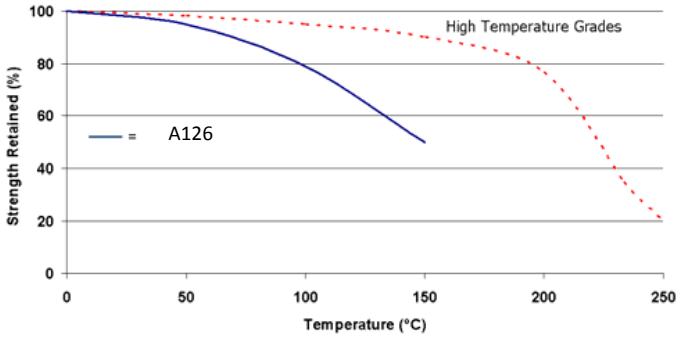


Cure times are typical at 23°C. Copper and its alloys will follow the faster cure while oxidised or passivated surfaces like stainless steel will tend towards the slower curve. Lower temperatures or large gaps will tend to extend the cure time. To reduce the cure time the use of Permabond A905, ASC10,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

Typical Performance of Cured Adhesive

Torque strength (M10 Zn plated ISO10964)	Break 33 Nm ***290 in.lb*** Prevail 58 Nm ***520 in.lb***
Shear strength (steel collar & pin)	21 MPa ***3000 psi***
Coefficient of thermal expansion	90 x 10^{-6} mm/mm/°C
Dielectric strength	11 mV/mm
Thermal conductivity	0.19 W/(m.K)

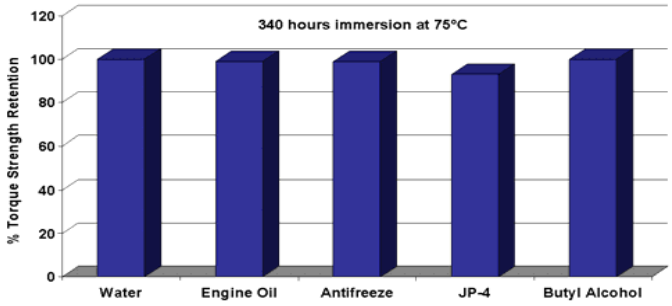
Temperature Resistance



"Hot strength" shear strength tests performed on mild steel. 24hr cure at room temperature and conditioned to pull temperature for 30 minutes before testing.

A126 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 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 a circumferential bead; preferentially to the female component. Assemble with a twisting action.
2) For larger components use thixotropic products to prevent run off.
3) Take care to ensure adhesive does not enter ball races or other mechanisms.

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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