

Features & Benefits

- 💧 Adhesion to a wide variety of substrates
- 💧 Full cure at room temperature
- 💧 Easy to apply
- 💧 Fast setting

Description

PERMABOND® ET500 is a two-part fast-setting epoxy adhesive which bonds to a wide variety of substrates such as wood, metal, ceramics and some plastics and composites. It cures rapidly at room temperature to give handling strength in approximately 5 minutes. This product is ideal for general purpose bonding. It is typically used for small component assembly and is suitable for applications that require a clear bond line.

Physical Properties of Uncured Adhesive

	ET500A	ET500B
Chemical composition	Epoxy Resin	Amine Hardener
Appearance	Colourless	Colourless
Viscosity @ 25°C	12,000-18,000 mPa.s (cP)	15,000-30,000 mPa.s (cP)
Specific gravity	1.2	1.1

Typical Curing Properties

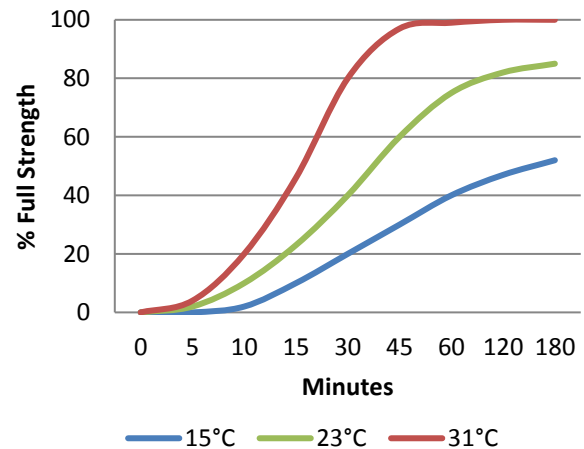
Mix ratio by volume	1:1
Maximum gap fill	2 mm <i>0.08 in</i>
Usable / pot life @23°C	3-4 mins
Handling time @23°C	5-8 mins
Working strength @23°C	30-60 mins
Full cure @23°C	24 hours

Typical Performance of Cured Adhesive

Shear strength (mild steel)* (ISO4587)	12-18 N/mm ² <i>(1700 - 2600 psi)</i>
Peel strength (aluminium) (ISO4578)	5-20 N/25mm <i>(1-4 PIW)</i>
Hardness (ISO868)	70-80 Shore D
Elongation at break (ISO37)	<5%
Glass transition temperature Tg	40-50°C <i>(104-122°F)</i>
Dielectric strength	15-25 kV/ mm
Thermal conductivity	0.22 W/(m.K)
Water absorption (ISO62)	0.75% (24 hrs submersion @23°C)

*Strength results will vary depending on the level of surface preparation and gap.

Strength Development



Graph shows typical strength development of bonded components. An increase of 8°C in temperature will halve the cure time. Lower temperatures will result in a slower cure time.

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