

Features & Benefits

- Adhesion to a wide variety of substrates
- Full cure at room temperature
- Easy to apply
- Self-levelling
- Ideal for electronic potting & encapsulation applications

Description

PERMABOND® MT382 two-part, modified epoxy adhesive designed for sealing/bonding and potting applications. It has excellent adhesion to Nylon, ABS, Polycarbonate and other plastics as well as a variety of different metals. The product can be cured in different mix ratios depending on the flexibility required in the final cured product. MT382 is self-levelling.

Physical Properties of Uncured Adhesive

	MT382A	MT382B
Chemical composition	Epoxy Resin	Polyamine based Hardener
Appearance	Black	Yellow
Mixed appearance	Charcoal black	
Viscosity @ 25°C	20,000 – 45,000 mPa.s (cP)	200-400 mPa.s (cP)
Specific gravity	1.3	1.0

Typical Curing Properties

Mix ratio	2:1 by volume 130:50 by weight
Maximum gap fill	0.5 mm <i>0.02 in</i>
Usable / pot life @25°C	20-50 mins
Handling time to 0.1 N/mm ² @25°C	105-120 mins
Full cure @25°C	≥72 hours

Electrical Properties*

Linear Coefficient of Thermal Expansion	112 x 10 ⁻⁶ m/m C (below T _g) 170 x 10 ⁻⁶ m/m C (above T _g)
Dielectric Constant	6
Dielectric Strength	20 - 30 kV/ mm
Volume Resistivity	1 - 3 x 10 ¹¹ Ohm-cm

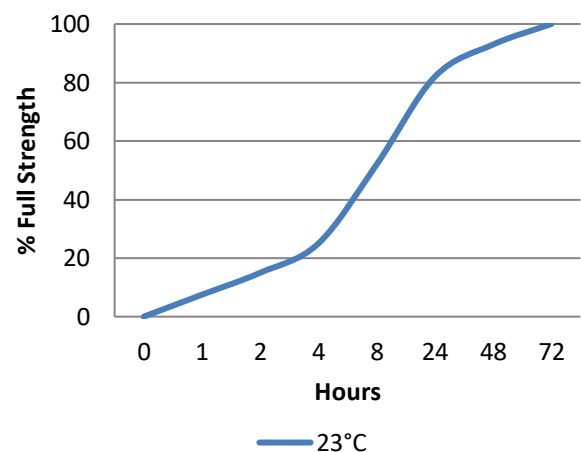
*Asterisk denotes values considered typical to associated resin systems or extrapolated from other test results.

Typical Performance of Cured Adhesive

Shear strength ISO4587	Mild steel: 4-7 N/mm ² (600 - 1000psi) Aluminium: 6-8 N/mm ² (900-1200psi) ABS: 4-6 N/mm ² (600-900psi) Acrylic: 2-5 N/mm ² (300-700psi) Nylon: 2-4 N/mm ² (300-600psi) Polycarbonate: 4-6 N/mm ² (600-900psi) PVC: 3-5 N/mm ² (400-700psi) FRP Glass Epoxy: 5-7 N/mm ² (700-1000psi) FRP Glass Polyester: 5-7 N/mm ² (700-1000psi) Carbon Fibre: 6-8 N/mm ² (600-1200psi)
Hardness (ISO868)	55-85 Shore A 20-30 Shore D
Elongation at break (ISO37)	150 -200%
Peel strength (aluminium) (ISO4578)	140-160 N/25mm (31-36 PIW)
Thermal conductivity	0.47 W/(m.K)

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

Strength Development



Graph shows typical strength development of bonded components at 23°C. Curing at higher or lower temperatures may affect cure speed.

The information given and the recommendations made herein are based on our research and are believed to be accurate but no guarantee of their accuracy is made. In every case we urge and recommend that purchasers before using any product in full-scale production make their own tests to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purpose under their own operating conditions. THE PRODUCTS DISCLOSED HEREIN ARE SOLD WITHOUT ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED.

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