

Features & Benefits

- Adhesion to a wide variety of substrates
- Full cure at room temperature
- Easy to apply
- Soft & flexible
- Self leveling
- Low viscosity

Description

PERMABOND® MT3809 is a 10:1, two-part, modified epoxy adhesive designed for potting applications. It has excellent adhesion to Nylon, ABS, Polycarbonate and other plastics. When cured, this adhesive is soft and reasonably flexible. Its low viscosity makes it suitable for potting intricate parts.

Physical Properties of Uncured Adhesive

	MT3809A	MT3809B
Chemical composition	Epoxy Resin Based	Polyamine Hardener
Appearance	Grey	Black
Viscosity @ 25°C	20rpm: 6,000 – 10,000 mPa.s (cP) 2rpm: 15,000 – 25,000 mPa.s (cP)	5,000-10,000 mPa.s (cP)
Specific Gravitt	1.25	1.00

Typical Curing Properties

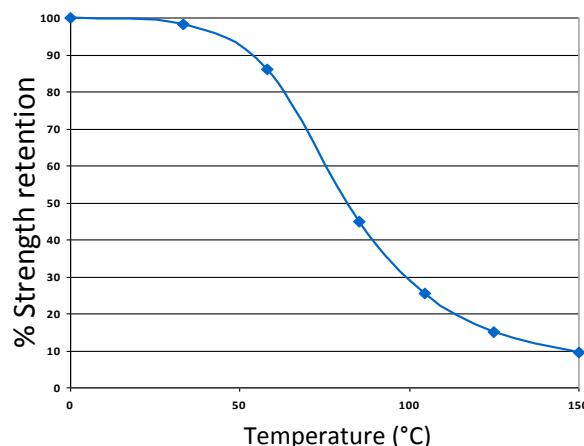
Mix ratio	10:1 by volume 12.5:1 by weight
Maximum gap fill	2 mm 0.08 in
Usable / pot life @20°C	10-12 mins
Handling time	25-30 mins
Full cure	≥72 hours

Typical Performance of Cured Adhesive

Shear strength (mild steel)*	6 - 8 N/mm² (900 - 1200 psi)
Peel strength (ISO 4578)*	60-80 N/25mm (13-18 PIW)
Hardness	75-85 Shore A 20-30 Shore D
Elongation at break	200%
Glass transition temperature Tg	+40°C (104°F)

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

Temperature Resistance



MT3809 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 -40°C (-40°F) depending on the materials being bonded.

Additional Information

This product is not recommended for use in contact with strong oxidizing materials.

Information regarding the safe handling of this material may be obtained from the material safety data sheet (MSDS).

Users are reminded that all materials, whether innocuous or not, should be handled in accordance with the principles of good industrial hygiene.

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Surface Preparation

Surfaces should be clean, dry and grease-free before applying the adhesive. Use a suitable solvent (such as acetone or isopropanol) for the degreasing of surfaces. Some metals such as aluminium, copper and its alloys will benefit from light abrasion with emery cloth (or similar), to remove the oxide layer.

Directions for Use

1. Measure volumetrically 10 parts resin to 1 part hardener. Mix thoroughly taking care not to entrap air. Adhesive can be applied and mixed by automated dispensing equipment.
2. Apply material. If potting; take care to fill component and not entrap air.
3. If bonding a joint, assemble the parts. Parts must be joined within 10 minutes of mixing the two epoxy components.
4. Large quantities and/or higher temperature will decrease the usable life or pot life.
5. Apply pressure to the assembly by clamping for 25-30 minutes or until handling strength is obtained.
6. Full cure will be obtained after a **minimum of 72 hours** at 25°C (77°F). Heat can be used to accelerate the curing process.

NB. Exercise caution when mixing large quantities due to exothermic reaction.

Storage & Handling

Storage Temperature	5 to 25°C (41 to 77°F)
Shelf Life Stored in original unopened containers <i>May require shaking or stirring if contents have settled.</i>	12 months

Other Products Available

Anaerobics

- Toughened
- Gas & water approved
- High temperature resistance
- Flexible

Cyanoacrylates

- Low bloom / low odour
- Flexible
- High temperature resistance

Epoxies

- Fast cure
- Toughened
- Flexible grades

Toughened Acrylics

- Rapid cure
- Low odour
- Pre-mixed
- Gap filling

UV Light Cured

- Glass / plastic bonding
- Optically clear
- Non-yellowing

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