

### Features & Benefits

- Adhesion to a wide variety of substrates
- Fast cure at room temperature
- No mix application
- High shear and peel strength
- Good impact strength
- Good chemical resistance

### Description

**PERMABOND TA440** is a two component structural acrylic adhesive suitable for bonding metals, glass, wood, ferrites, ceramics and some rigid plastics. This adhesive may be used in a variety of structural bonding applications due to its versatile performance capabilities.

**Permabond TA440** provides high strength while maintaining excellent flexibility, resulting in tough, durable bonds with outstanding impact and peel resistance. Handling strength is achieved in a few minutes at room temperature.

### Physical Properties of Uncured Adhesive

	TA440 A	TA440B
Chemical composition	Urethane methacrylate	Urethane methacrylate
Appearance	Amber	Green
Viscosity @ 25°C	8,000-12,000mPa.s (cP)	8,000-12,000mPa.s (cP)
Density	1.1	1.1

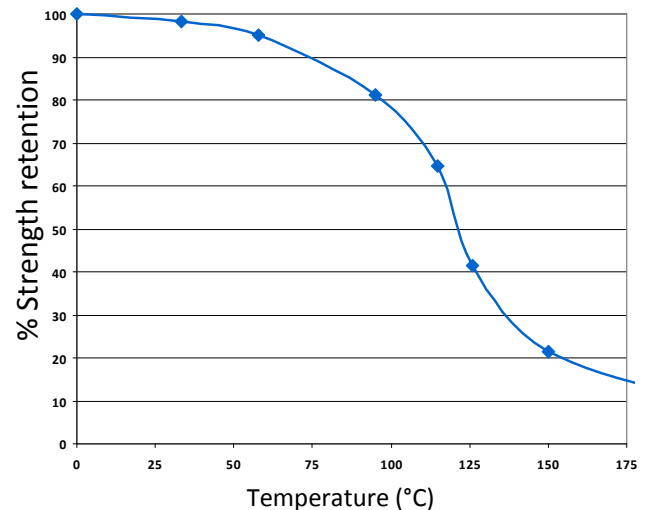
### Typical Curing Properties

Ratio of use	1:1
Maximum gap fill	0.5 mm (0.02")
Handling time	<30 seconds
Working strength	30-60 mins
Full cure	24 hours

### Typical Performance of Cured Adhesive

Shear strength (mild steel)	15-25 N/mm <sup>2</sup> (2200-3600 psi)
Peel strength (ISO 4578)	45-65 N/25mm (10-14 PIW)
Tensile strength (DIN53288)	25N/mm <sup>2</sup> (3600 psi)
Impact strength (ASTM D-950)	25 Nmm/mm <sup>2</sup>
Coefficient of thermal expansion (ASTM D-696)	80 x 10 <sup>-6</sup> 1/K
Thermal conductivity (ASTM C-177)	0.1 W/(m.K)
Dielectric constant (ASTM D-150)	4.6 MHz
Dielectric strength (ASTM D-149)	30-50 kVmm
Volume resistivity (ASTM D-257)	2 x 10 <sup>13</sup> Ohm.cm

### Temperature Resistance



TA440 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.

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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## 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.

## Surface Preparation

Surfaces should be clean, dry and grease-free before applying the adhesive. Permabond Cleaner A is recommended for the degreasing of most 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) Surfaces must be clean, dry and grease-free prior to bonding.
- 2) Apply TA440A to one surface and TA440B to the other.
- 3) Alternatively, dispense 'bead-on-bead' (one bead on top of the other) and then assemble parts.
- 4) Applying adhesive side by side is not advisable as this may not achieve adequate mixing.
- 5) Maintain pressure until handling strength is achieved. The time required will vary according to the joint design and surfaces being bonded.
- 6) Allow 24 hours for adhesive to fully cure. Accelerated cure times may be achieved by heating.

## Storage & Handling

Storage Temperature	5 to 25°C (41 to 77°F)
Shelf Life Stored in original unopened containers	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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