

# Technical data sheet



Product: TW5364

Manufacturer: PERMABOND ENGINEERING ADHESIVES

Product group: KLEBSTOFF

Article group: 2-K KLEBSTOFF

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## PERMABOND® TW5364

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Tewipack Uhl GmbH  
Industriestraße 15  
D-75382 Althengstett

Telephone:  
+49(0)7051/9297-0  
Fax:  
+49(0)7051/9297-99

E-Mail:  
info@tewipack.de  
Website:  
www.tewipack.de

Managing director:  
Alexander Uhl,  
Michael Uhl  
HRB 330424  
Amtsgericht  
Stuttgart

Bank details:  
Sparkasse  
Sindelfingen  
Pforzheim  
Calw  
BLZ 666 500  
85  
Konto 17 787

Commerzbank  
Sindelfingen  
BLZ 603 400 71  
Konto 8 001 166

Vereinigte  
Volksbank AG  
Böblingen  
BLZ 603 900 00  
Konto 80 089  
003

Postbank  
Stuttgart  
BLZ 600 100  
70  
Konto 146  
294 708

### Features & Benefits

- Adhesion to a wide variety of substrates
- Easy to apply
- High shear strength
- Good impact strength
- Good chemical resistance
- Non-drip rheology

### Description

PERMABOND® TW5364 is a two-part, 1:1 mixable epoxy adhesive with good adhesion to a variety of substrates such as wood, metal, ceramics and some plastics and composites. Permabond TW5364 forms tough bonds with excellent shear strength. Optimal strength performance is achieved when the adhesive is cured at 60°C for 1 hour.

### Physical Properties of Uncured Adhesive

	TW5364A	TW5364B
Chemical composition	Epoxy Resin	Polyamine Hardener
Appearance	Cream	Black
Viscosity @ 25°C	30,000-40,000 mPa.s	60,000-70,000 mPa.s
Specific gravity	1.35	1.08

### Typical Curing Properties

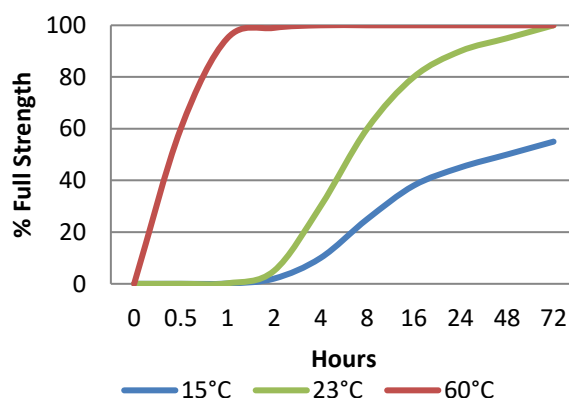
Mix ratio	1:1 by volume 10:8 by weight
Maximum gap fill	2 mm
Usable / pot life @23°C	2 hours
Handling time @23°C	3-4 hours
Working strength	@23°C : 8 hours @60°C: 30 mins
Full cure @23°C	@23°C : 72 hours @60°C: 1 hour
Full cure via induction	≥130°C: 10 mins

### Typical Performance of Cured Adhesive

Shear strength* (ISO4587) Adhesive cured 1 hour@60°C	Steel: >22 N/mm² Aluminium: >22 N/mm²
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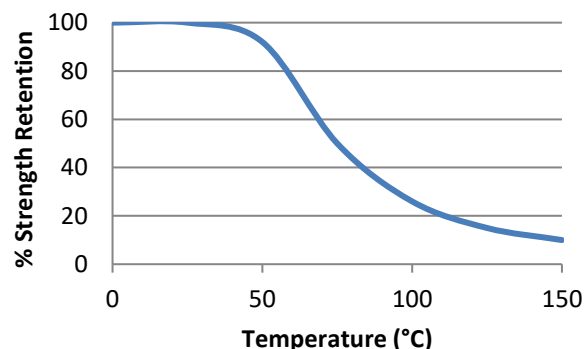
\*Strength results will vary depending on the level of surface preparation and gap.

### 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.

### Hot Strength



"Hot strength" shear strength tests performed on mild steel. Fully cured specimens conditioned to pull temperature for 30 minutes before testing at temperature.

TW5364 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 depending on the materials being bonded.

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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 safety data sheet.

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. 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. Dual cartridges:
  - a) Insert the cartridge into the application gun and guide the plunger into the cartridge.
  - b) Remove the cartridge cap and dispense material until both sides are flowing.
  - c) Attach the static mixer to the end of the cartridge and begin dispensing the material.
2. Apply material to one of the substrates.
3. Join the parts. Parts must be joined within 2 hours 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 4 hours or until handling strength is obtained.
6. Full cure will be obtained after 72 hours at 23°C. It is recommended to cure this product for 1 hour @ 60°C to achieve optimum bond strength performance.

### Video Links

Surface preparation:

<https://youtu.be/8CMOMP7hXjU>



Two-part epoxy directions for use:

<https://youtu.be/GRX1RyknYqc>



## Storage & Handling

Storage Temperature	5 to 25°C
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[www.permabond.com](http://www.permabond.com)

• UK: 0800 975 9800

• General Enquiries: +44 (0)1962 711661

• US: 732-868-1372

• Asia: + 86 21 5773 4913

[info.europe@permabond.com](mailto:info.europe@permabond.com)

[info.americas@permabond.com](mailto:info.americas@permabond.com)

[info.asia@permabond.com](mailto:info.asia@permabond.com)

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