Technical data sheet

Product:	TW5364
Manufacturer:	PERMABOND ENGINEERING ADHESIVES
Product group:	KLEBSTOFF
Article group:	2-K KLEBSTOFF
Download:	12.05.2024

PERMABOND® TW5364

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PERMABOND® TW5364

Two-Part Epoxy

Provisional Technical Datasheet

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

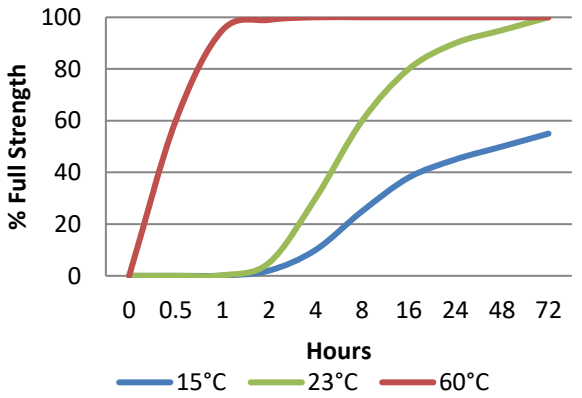
Mix ratio	1:1 by volume 10:8 by weight
Maximum gap fill	2 mm
Usable / pot life @23°C	2 hours
Handling time @23°C	3-4 hours
Working strength	@23°C : 8 hours @60°C: 30 mins
Full cure @23°C	@23°C : 72 hours @60°C: 1 hour
Full cure via induction	≥130°C: 10 mins

Typical Performance of Cured Adhesive

Shear strength* (ISO4587) Adhesive cured 1 hour@60°C	Steel: >22 N/mm² Aluminium: >22 N/mm²

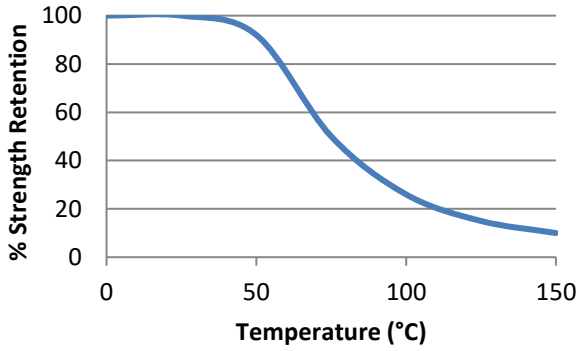
**Strength results will vary depending on the level of surface preparation and gap.*

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.

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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