

Features & Benefits

- Adhesion to a wide variety of substrates
- Full cure at room temperature
- Easy to apply
- Good chemical resistance
- Non-drip rheology

Description

PERMABOND® ET5383 is a structural, room temperature curing epoxy adhesive that has excellent adhesion to a wide variety of surfaces such as wood, metal, ceramics and many plastic and composite materials. It exhibits good resistance to petrol, oils and water and has an extended cure time making it suitable for larger applications and batch production processes. Its thixotropic "non-slump" nature makes it suitable for gap filling or vertical application.

Physical Properties of Uncured Adhesive

	ET5383A	ET5383B
Chemical composition	Epoxy Resin	Polyamine Hardener
Appearance	White	Beige
Viscosity @ 25°C	20rpm: 60,000-100,000 mPa.s (cP) 2rpm: 200,000-300,000 mPa.s (cP)	20rpm: 40,000-80,000 mPa.s (cP) 2rpm: 100,000-200,000 mPa.s (cP)
Specific gravity	1.4	1.1

Typical Curing Properties

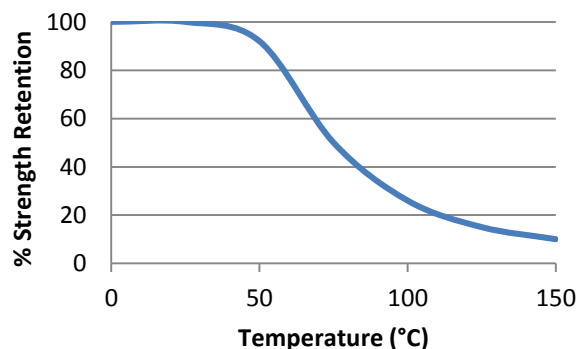
Mix ratio	1:1 by volume 100:80 by weight
Maximum gap fill	5 mm 0.2 in
Usable / pot life @23°C	2-3 hours
Handling time @23°C	8 hours
Working strength	@23°C: 24 hours @60°C: 1 hour
Full cure @23°C	@23°C: 72 hours @60°C: 2 hours

Typical Performance of Cured Adhesive

Shear strength* (ISO4587)	Steel: 18-20 N/mm² (2600-2900 psi) Zinc: 17-20 N/mm² (2500-2900psi)
Hardness (ISO868)	75-85 Shore D
Elongation (ISO37)	8%
Glass Transition (Tg)	45°C
Dielectric Strength	15-25 kV/mm

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

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. ET5383 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 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.

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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. 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 8 hours or until handling strength is obtained.
6. Full cure will be obtained after 72 hours at 23°C (73°F).

Storage & Handling

Storage Temperature	5 to 25°C (41 to 77°F)
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Other Products Available

Anaerobics

- Thread lockers
- Thread sealants
- Gasket makers
- Sealants / retainers

Cyanoacrylates

- Instant adhesives
- For rapid bonding of metals, plastics, rubber and many other materials

Epoxies

- Two-part room temperature cure adhesives
 - Single-part heat cure adhesives
- Modified Technology (MT) flexible grades available

MS-Polymers

- Single-part, moisture-curing, flexible sealants

Polyurethanes

- Two-part room temperature curing adhesives

Toughened Acrylics

- Rapid curing, high strength structural adhesives

UV Light Cured Adhesives

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

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