

Technical data sheet



Product: ES5722

Manufacturer: PERMABOND ENGINEERING ADHESIVES

Product group: KLEBSTOFF

Article group: 1-K KLEBSTOFF

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PERMABOND® ES5722

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Features & Benefits

- Excellent adhesive strength
- Excellent resistance to vibration
- High temperature resistance
- Good resistance to chemicals
- Non-sag, thixotropic

Description

PERMABOND® ES5722 is a single-part heat cured epoxy adhesive with excellent adhesion to metal surfaces as well as composite materials. The high bond strength of this adhesive allows it to replace mechanical fastening, soldering, brazing or welding. ES5722 has been designed to be non-sagging, allowing the product to be used in large gaps and on vertical surfaces. This product is particularly suited for the bonding of mesh screens.

Physical Properties of Uncured Adhesive

| | |
|----------------------|--|
| Chemical composition | Epoxy Resin |
| Appearance | Grey |
| Viscosity @ 25°C | 2 rpm 150,000 – 300,000 mPa.s (cP) 20 rpm 40,000 – 100,000 mPa.s (cP) |
| Specific Gravity | 1.18 |

Typical Curing Properties

| | |
|--------------------------|--|
| Flow at high temperature | Non-flowing |
| Maximum gap fill | 5 mm 0.2 in |
| Cure speed (oven) * | 130°C (266°F): 60 minutes 150°C (300°F): 45 minutes |
| Cure speed (induction) | <3 minutes |

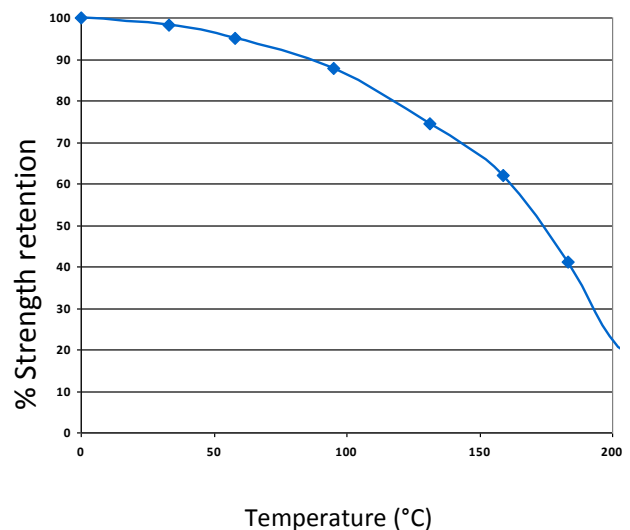
**Actual cure times will depend on the time it takes for the adhesive to reach this temperature - for example, large assemblies or a crowded oven will require longer to reach full cure. Alternative, quicker methods of curing include induction, hotplates, infrared lamps and hot-air guns.*

Typical Performance of Cured Adhesive

| | |
|--------------------------------|---|
| Shear strength* ISO4587 | Steel 20 - 30 N/mm ² (2900 – 4400 psi) Zinc 14 - 27 N/mm ² (2000 – 4000 psi) |
| Tensile Strength ASTM D2095 | 30-35 N/mm ² |
| Hardness ISO868 | 75-85 Shore D |

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

Temperature Resistance

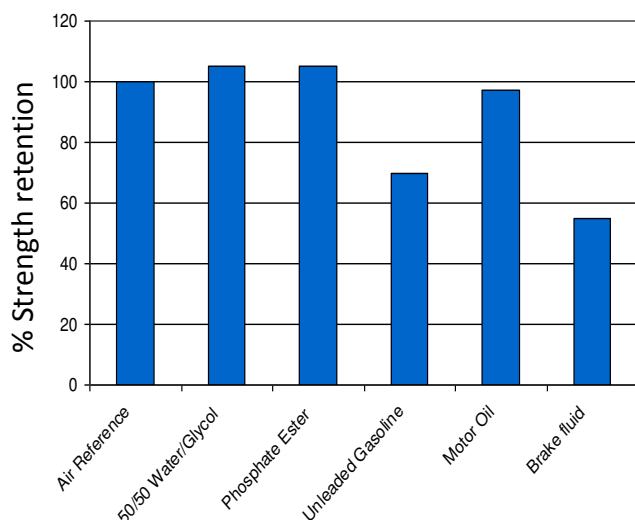


ES5722 can withstand higher temperatures for brief periods (such as for paint baking and wave soldering processes) providing the joint is not unduly stressed. The minimum temperature the cured adhesive can be exposed to is -40°C (-40°F) depending on the materials being bonded.

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Chemical Resistance



Specimens were immersed for 30 days at 85°C and tested at room temperature.

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. 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) The adhesive should be dispensed from the cartridge via the nozzle supplied (this can be cut to give the appropriate sized bead to cover the bond area).
- 2) Apply the adhesive to one surface and avoid entrapping air.
- 3) Assemble parts applying sufficient pressure to ensure the adhesive spreads to cover the entire bond area.
- 4) Use a jig / clamp to prevent parts moving during cure.
- 5) It is advisable not to disturb the joint until the adhesive is fully cured.
- 6) Cure with heat – see page one for cure schedule.

Storage & Handling

| | |
|--|-----------------------|
| Storage Temperature | 2 to 7°C (35 to 45°F) |
| Shelf Life Stored in original unopened containers | 12 months |

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