



ME100 Levelling & Bonding Epoxy

Technical data sheet

ME100 Levelling & Bonding Epoxy is a high quality epoxy bonding paste / filler specially developed for levelling and bonding teak deckings.

Wetting properties are excellent and still thixotropic properties allows for levelling at up to 25 mm if needed.

The system has low density of around 0,75 kg/ltr and is easily sanded within short working times.

System cures well from 10 °C, is blush free and needs no induction time.

Mixing ratio is 1:1 by volume or weight making it easy and safe to use.

System Features :



Very good levelling / fairing system

Excellent adhesion properties

Can be used for adhesion using vacuum bagging

Ease of application / spreading & levelling

High elongation to break ensures no bonding failures over time

Lightweight fillers for reduced weight & sand-ability.

Temperature Resistant Low temperature cure down to 10°C

1:1 mix ratio for easy and safe mixing

Blue product colour for easy location of material

Good Thermal resistance for tropical regions



ME 100 Epoxy for Teak

Properties components

ME100A (A-component = Resin)

Colour	Blue
EEW	200-215
45-55%	Natural resources or refined waste origin products origin

ME100B (B-component = Hardener)

Colour	Brownish red
AHEW	145-160
27-35%	Natural resources or refined waste origin products origin

Mixed resin properties

Density	0,75 – 0,80
Working time 200g	1-2h at 23
Handling strength	8h at RT
Sanding	16-18h at RT
Full cure	7 days at RT or, 6h at 50 °C
Temperature resistance	70-80 degr Tg midpoint after 1 day RT cure and 6h at 50 °C

Storage

TS ME100 will be usable for minimum 24 months under proper storage conditions best between 10-30°C in its sealed container in dry and shade

Packaging

ME100 system comes 2x13kg kit equivalent to 37 litres total



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Technical Overview

Pat Handy tensile strength at different substrates.

2mm bondline and 8mm teak

Items conditioned at 14 days RT cure and 4h at 50 °C

Gelcoat surface:	failure internal in wood
Primed aluminium:	failure internal in wood
Primed stainless steel	failure internal in wood

All test has performed + 5,9 Mpa with failure mode in the teak

2mm **ME100** epoxy against stainless steel with Epoxy primer:

	-15 °C	23 °C	40 °C
6days RT Cure	12,7 MPa	14,7 MPa	9,9 MPa
Failure mode	Primer	Primer/ME100	Primer

2mm **ME100** epoxy against aluminium with Epoxy primer:

	-15 °C	23 °C	40 °C
6days RT Cure	10,4 MPa	13,4 MPa	9,7 MPa
Failure mode	Primer	Primer/ME100	Primer



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Mechanical properties

Test speed 2mm/min, RT test

Conditions	Tensile Strength MPa	Elongation to break
4 day RT cure	8,4 - 9,0 MPa	5 - 7%
4 day RT + 12h 50degr	8,6 - 11 MPa	3,8 - 5%

Chemical resistance

20 days at room-temp.

Solvent Nafta:	Weight increase + 0,57%. No visible deterioration
Chloride:	weight increase - 2,84%. Slight deterioration of surface
Gasoline:	Weight increase + 6,77%. Slight swelling
Dem.water:	weight increase + 1,45%. No visible deterioration
Alcohol:	Weight increase + 14,86%. Cracks in surface
Acetic Acid 32%	sample about 20% dissolved



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Working instructions

Surface Preparation

Surfaces must be clean, dry, and free of any dirt, grease, oil, etc.

Steel or **Aluminium** should be sandblasted or ground to clean metal. Apply a commercially approved epoxy primer, all following the primer manufacturer's instructions accordingly.

Fibreglass / Gelcoat should be ground with 36-40 grit papers until no shiny surface is present. Vacuum clean and wipe down with clean rags. Use eventually alcohol (isopropyl alcohol 99%) Do NEVER use acetone on grinded surface made of polyester.

Wood should be scuffed with 36-40 grit papers. To remove any leftover dirt and dust, vacuum clean and wiped down with clean rags.

Mixing Instruction

Mix products 1:1 by weight or volume.

Use a drilling machine at low RPM or similar and ensure products are very well mixed and even in colour.

Mixing MUST be thorough to ensure a proper cure. Application is recommended within 10-35°C.

Levelling and bonding precautions

Regardless of the substrate, it is mandatory that a sample adhesion test be performed to the primed/sealed surface at least 24 hours prior to the final glue-down. Sanding after 16-20h at RT.



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Levelling

For levelling / fairing, pour out and level the ME100 as a uniform coating on the newly grinded, clean, dry surface. Allow to cure for minimum 16 hours at RT. A second layer may be poured within 12-16 hours at RT without abrading the first layer, as long as the surface is clean, dry and free of any dirt, grease or oil contaminations.

Best result if surface is grinded slightly with grid 36-40 before applying following layers. Ensure dust is removed.

Bonding

Before bonding deck panels grind the surface or epoxy primer using a 36-40 grit abrasive pad.

Apply the ME100 epoxy in a uniform layer using a 3-6mm notched trowel.

Panels or planks should be wiped with Acetone or similar degreaser.

Planks then be set into the TS ME100 within 30-40 minutes at Rt. Avoid direct sunlight. To ensure a proper installation be sure that the panels or planks are completely embedded in the ME100, leaving no voids. Planks will be adequately bonded for secondary operations after 8 hours at RT.

All results given in good faith using standard laboratory conditions and practice.

This information is not to be taken as a warranty or representation for which we assume legal responsibility. It is offered solely for your consideration and investigation

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About Us

Rapallo Resins was established back in 2003 by Axel Liebmann.

Formulation and manufacturing of custom specific epoxy resins is one of the main activities.

Epoxy resins are manufactured for surface coatings, tooling, yacht building, construction, pipe rehabilitation etc. all according to each individual needs of the customer.

Balsa wood being widely used as a strong and cost-effective core material in composites is a part of our business

Consumables for vacuum infusion of composites the third area of the company.

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