

TEAK SOLUTIONS MARINE EPOXY®

TYPE: ME100 A/B LEVELLING & BONDING EPOXY PRODUCT INFORMATION

DESCRIPTION

TEAK SOLUTIONS (TS) ME100 Levelling & Bonding Epoxy is a custom-blended epoxy mastic of high quality resins, hardeners and engineered fillers to yield a **blush-free, light weight, flexible and easily-sanded** system used for both levelling and the final bonding of teak panels or planks. TS ME100 weighs only mixed approx. 0.75 kg per litre / 1mm per m² when cured and its cell-like structure makes it an excellent sound and thermal insulator. The viscosity of the TS ME100 is formulated to be high enough to remain in place when used for deck fairing, but low enough to provide excellent wet-out for bonding. The TS ME100 Levelling & Bonding Epoxy will cure in temperatures as low as 10°C. Developed to be user-friendly, the simplified 1:1 mix ratio allows a batch of any size to be easily measured and mixed. Once thoroughly mixed, the material can be spread immediately, requiring no induction time. See Properties Chart at the end of this document for further specifications.

ADVANTAGES

- Very good adhesion to used materials.
- Excellent levelling / fairing material.
- Excellent wet-out of bonding surfaces.
- Designed for adhesion using vacuum bagging system.
- Medium viscosity for ease of spreading and levelling.
- Flexible strength resists shock and twist.
- Lightweight fillers for reduced weight and sand-ability.
- Good low temperature cure down to 10°C / 50°F.
- 1:1 mix ratio for easy mixing.
- Green product colour for easy location of material.
- Non-blushing.

GENERAL SURFACE PREPARATION

All surfaces must be clean, dry, and free of any dirt, grease, oil, etc. before beginning any surface preparation.

Steel should be sandblasted or ground with 24-36 grit disc pads to clean white metal and as per specified profile, then vacuum clean surface to remove any grit and dust, wipe with a recommended degreaser and apply a commercially approved epoxy primer, all following the primer manufacturer's instructions accordingly.

Aluminum should be sandblasted or ground with 24-36 grit disc pads to clean metal and a specified profile. Vacuum clean surface to remove any grit and dust. Then follow if necessary with a vinyl wash primer or similar, remember to rinse, wash toughly with water. When the substrate is completely dry and clean, apply a commercially approved epoxy primer, all following the primer manufacturer's instructions accordingly.

Fibreglass / Gelcoat should be ground with 36 grit papers until no shiny surface is present. To remove any leftover dirt and dust, vacuum clean and wiped down with clean rags, the surface using Acetone or similar degreaser.

Wood should be scuffed with 36 grit papers. To remove any leftover dirt and dust, vacuum clean and wiped down with clean rags, the surface using Acetone or similar degreaser.

MIXING INSTRUCTIONS

Stir both A & B components before combining, especially if less than a full container is being used. Mix by volume 1:1 the green base resin A with the brownish red hardener B, using a professional slow turning drill / mixer with a spiral mixing paddle or equivalent. Operate at as low RPM as possible and never more than 700 RPM. Always mix at the lowest possible speed to avoid excess air entrapment and not to damage the hollow fillers. TS ME100 is supplied as a green base resin A and a brownish red hardener B, which must be mixed thoroughly to achieve a uniform green colour with no streaking. Mixing MUST be thorough to ensure a proper cure. Application is recommended within 10-35°C.

LEVELLING / 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.

LEVELLING

For levelling / fairing, flow out and level the TS ME100 as a uniform coating on the newly grinded, clean, dry substrate. Allow the epoxy to cure for minimum 16 hours at RT. It is not recommended to cast more than 10-12mm of TS ME100 in a single pour at RT. due to the possibility of heat distortion. 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. (Note! to insure the best possible result, always grind / scuff up the surface between each applications) When hard and dry to the touch (minimum 16 hours at RT) to smooth the surface for further applications, aggressively grind the TS ME100 using a 36 grit abrasive pad. Note! If sanded fairing is to be left exposed to contamination, coat with an epoxy primer to protect the open pores.

BONDING

Before bonding deck panels or planks, grind the surface or epoxy primer using a 36 grit abrasive pad. Apply the TS ME100 in a uniform layer using a 3-6mm notched trowel. Panels or planks should be wiped with Acetone or similar degreaser, then be set into the TS ME100 within 45-50 minutes, sooner if temperatures are above 25°C or if surface is in direct sunlight. To ensure a proper installation be sure that the panels or planks are completely embedded in the TS ME100, leaving no voids. Panels will be adequately bonded for secondary operations after 8 hours at RT.

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MIXED RESIN PROPERTIES AND RESULTS AT RT / 23°C OR AS DEFINED

STORAGE

TS ME100 will be usable for minimum 24 months under proper storage conditions best between 12-26°C in its sealed container. Prolonged storage may cause the hardener to darken. After prolonged storage, it is advisable to test a small mix to make sure it is viable. Be sure to pre-mix the individual containers before testing. Freezing may cause crystallization in the resin side. If this occurs, warm to 55-70°C and stir to melt crystals.

PACKAGING

TS ME100 levelling & bonding epoxy comes in containers as either a 10L kit or 38L kit

PROPERTIES COMPONENTS

TS ME100A (A-component = Resin)

Colour Green
EEW 200-215

Amount of product coming from natural resources or refined waste products: 45-55%

TS ME100B (B-component = Hardener)

Colour Brownish red
AHEW 125-140

Amount of product coming from natural resources or refined waste products: 27-35%

Properties	Results
Hardness – Shore D	60-65
Specific Gravity- Base resin A	0,90-1,01 g/cm3
Specific Gravity- Hardener B	0,72-0,85 g/cm3
Specific Gravity, slowly mixed component A & B	0,70-0,85 g/cm3
Flash Point – Resin A component.	>200°C.
Flash Point – Hardener B component.	>98°C.
Max Exotherm (200g mass at RT)	95-105°C at RT.
Gel Time. (200g mass at RT)	55-65 min at RT.
Open Time – 3mm material thickness.	<150 min at RT.
Film Set Time at RT. – 3mm material thickness.	6-8 hrs at RT.
Film Set Time at 10°C – 3mm material thickness.	>10 hrs at 10°C
Surface ready for sanding at RT.	16-18 hrs at RT.
Fully Cured at RT.	7 days at RT or 6 hrs at 50°C.
DCS Heat Distortion. Tg midpoint after 1 day RT cure + 6 hrs at 50°C.	78-85°C.
Suitable Temperature.	-25°C up to approx. +81°C.
Application Temperature.	+10 to +35°C.

Strength and elongation tests	Tested at RT / 23°C aft. cured 4 days
Tensile Strength MPa	<8,8 MPa
Tensile Modulus MPa	<1400 MPa
Tensile Elongation %	5,0-7,0%

Adhesion tests*	Material failure	Tested at -15 / +20 / +40°C
Adhesion to Teak MPa	Teak Failure	Average 5,9 MPa
Adhesion to Gelcoat MPa	Gelcoat Failure	Average 5,9 MPa
Adhesion to primed Aluminum MPa	Primer failure	10,4 / 13,4 / 9,7 MPa
Adhesion to primed Steel MPa	Primer failure	12,7 / 14,7 / 9,9 MPa
Adhesion to Aluminum MPa	Adhesion failure	6,1 / 8,1 / 8,7 MPa
Adhesion to Steel MPa	Adhesion failure	8,6 / 8,6 / 8,9 MPa

* Tested after 7 days at RT cure + 6 hrs at 50°C.

ATTENTION

Teak Solutions Marine Epoxies can cause skin and eye irritation upon frequent or prolonged exposure. Avoid contact with skin and eyes by the use of gloves, goggles, impervious clothing and barrier creams. In case of accidental contact, wash skin thoroughly with soap and water. In the event of eye contact, flush eyes with water for 15 minutes and seek medical attention. See MSDS for further information and first aid measures.

WARRANTY

In connection with the sale of this product, Teak Solutions S.L. (TS) makes no warranty of suitability for any specific purpose. In lieu of all warranties, expressed or implied, TS will refund the purchase price of any defective material. In no case will TDS be liable for incidental or consequential damages.

TECHNICAL SERVICE

For technical service, samples, or application assistance, please contact us at below contact info:

Teak Solutions S.L.

Marina Real Juan Carlos I, Muelle de Nazaret / Base n.1 (Entrada tinglado 4 y 5) 46023 Valencia, SPAIN
info@teaksolutions.com Tel: +34.96.328.70.57 www.teaksolutions.com