Fluid epoxy primer in water dispersion for consolidating and priming timber structures

WHERE TO USE
Consolidation of timber structural elements damaged by decay wood-rotting fungi or due to the attack of wood-eating insects.

Priming the end-parts of structural elements in high density wood (oak and chestnut) that need to be reconstructed by bonding a new wood element.

Some application examples
- Consolidating damaged parts of timber (fir, pine, poplar, oak, chestnut and other species) beams, trusses and columns due to biological attack.
- Priming parts in high density timber (oak and chestnut) beams, trusses and columns that need to be reconstructed by bonding a new wood element using Mapewood Gel 120 or Mapewood Paste 140.

TECHNICAL CHARACTERISTICS
Mapewood Primer 100 is an epoxy primer in water dispersion composed of two pre-measured parts that must be mixed before use (Part A = resin and Part B = hardener), prepared according to a formula developed in the Mapei research laboratories.

Due to Mapewood Primer 100’s low viscosity, once mixed it can impregnate and penetrate in depth into all types of porous wooden surfaces, improving cohesion and resistance to biological attack.

Used on low absorbency surfaces such as oak or chestnut. Mapewood Primer 100 improves the bonding of Mapewood Gel 120 and Mapewood Paste 140.

RECOMMENDATIONS
- Do not prime with Mapewood Primer 100 at temperatures below +10°C.
- Do not apply Mapewood Primer 100 on wet surfaces.

APPLICATION PROCEDURE
Preparing the substrate
- Timber elements structurally repairable by priming
  The timber surfaces must be perfectly clean and dry before consolidating with Mapewood Primer 100. Remove any paint with suitable products or using a scraper or by sanding.
- Heavily damaged wooden elements that need to be repaired with a new wood element
  If deep structural damages and serious alterations due to biological attack also in unseen or inaccessible parts should emerge after visual or instrumental diagnosis, secure the structure and remove the decayed part of the beam, column or truss with a clean cut.

Prepare the new wood element. Choose a type of wood of corresponding nature to the existing one and possibly with a better durability than the one that needs consolidating.

Drill a hole with an appropriate diameter and depth both in the middle of the headpiece of the damaged element and in the new wood element in order to insert a reinforcing rod or plate that can ensure a good structural connection.

An insert can be created as an alternative to the hole by cutting the easiest accessible side (only when Mapewood Paste 140 is used to anchor the new wood element). When sawing and drilling try to avoid splinters, superficial burns and the creation of areas with broken or flattened fibres.

In order to avoid the above mentioned it is recommended to adopt the following measures:
- always use sharpened sawing tools of the correct size and form (never use steel or cement blades, noses or cutters);
• use suitable supports and guides so the
  tools do not deviate when the blade hits
  knots or cross grains;
• remove shavings frequently in order to
  prevent them from pressing onto the
  surfaces and provoking friction and
  overheating;
• after the sawing stage, clean the surfaces
  from dust, shavings and splinters.

Note: Preferably prepare the wood surfaces
within 24 hours prior to applying Mapewood
Primer 100. This is to avoid superficial
oxidation, contact with pollutants and dust
deposits. Wait at least 5 hours at +20°C
before repairing the damaged element with
Mapewood Gel 120 or Mapewood Paste
140. The damaged parts of the elements
must be acclimatised before treating with
Mapewood Primer 100.

It is absolutely necessary that the moisture
content of the damaged element and the new
wood element be ± 3% with respect to that of
equilibrium in the service condition in order to
minimise the dimensional variations and
consequent tension development between
the parts that need to be bonded with
Mapewood Gel 120 or Mapewood
Paste 140.

Preparing the product
The two parts of Mapewood Primer 100
must be mixed together. Pour Part B into Part
A and mix with a drill fitted with a whip until
the resin is completely smooth.

Mixing ratio: 1 part by weight Part A and
1 part by weight Part B.

In order to avoid accidental measuring errors,
use the whole package of the product. If
partial quantities are necessary, use an
electronic precision scale.

Applying the product
• Timber elements structurally repairable
  through priming
  Apply Mapewood Primer 100 on the timber
  element with a roller or a brush.
  For good consolidation, the element must be
  completely saturated with the product and
  several coats must be applied. Due to the
  hardened Mapewood Primer 100’s excellent
  aggregating properties, it can restore the
  cohesion of the impregnated parts of the
treated element.

• Heavily damaged timber elements that need
  a new wood element
  Apply, possibly with a brush in a single coat,
  Mapewood Primer 100 on the wood
  surfaces. If there are holes, apply the product
  with a small bottle brush. Apply a second
  coat after the first has absorbed completely if
  the surface is very absorbent (e.g. fir or
  poplar). In this case Mapewood Primer 100
  improves the bonding of Mapewood Gel 120
  and Mapewood Paste 140, epoxy based
  structural adhesives especially for anchoring
  metal connecting rods between old and new
  timber elements. Once prepared,
  Mapewood Primer 100 is workable for
  approximately 40 minutes at +23°C.
  Mapewood Primer 100 must be used within
  its pot life.

Precautions to be observed before
application
No particular precaution is necessary at
temperatures between +10°C and +30°C.
During summer do not expose the product in
the sun and prime during the cool hours of
the day to avoid rapid hardening making the
product difficult to apply.

During the winter, it is recommended to heat
the wooden elements 24 hours before
applying Mapewood Primer 100 and protect
from frost. This is especially recommended
for exterior applications at temperatures
below +10°C. Store the product in a warm
place.

SAFETY INSTRUCTIONS FOR THE
PREPARATION AND APPLICATION
Mapewood Primer 100 Part A is irritant in
direct contact with the eyes and skin. Part B
contains a strongly caustic and harmful
substance. Following repeated and
prolonged contact, sensitivity could occur.
Avoid any contact with the skin and eyes by
always wearing protective gloves and
oggles both during the mixing of the two
parts and the application of the product. If in
contact with the skin, wash with plenty of
water and soap. If there should be any signs
of sensitivity, consult a doctor. In case of
contact with the eyes, wash with running
water and consult a doctor. Use in ventilated
areas.

Cleaning
Due to Mapewood Primer 100’s high
adhesive strength also onto metal, it is
recommended to wash working tools with
water before the product hardens.

CONSUMPTION
Approximately 150 g/m².

PACKAGING
1 kg units (Part A = 0.5 kg and Part B =
0.5 kg).
5 kg units (Part A = 2.5 kg and Part B =
2.5 kg).

STORAGE
The product must be stored in its original
packaging at a temperature not below +10°C.

FOR PROFESSIONALS.

WARNING
Although the technical details and
recommendations contained in this product
report correspond to the best of our
knowledge and experience, all the above
information must, in every case, be taken as
merely indicative and subject to confirmation
after long-term practical applications: for this
reason, anyone who intends to use the
product must ensure beforehand that it is
suitable for the envisaged application: in
every case, the user alone is fully responsible
for any consequences deriving from the use
of the product.

All relevant references
of the product are available
upon request.
### TECHNICAL DATA (typical values)

<table>
<thead>
<tr>
<th>PRODUCT IDENTITY</th>
</tr>
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<tbody>
<tr>
<td>Customs class:</td>
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<table>
<thead>
<tr>
<th>Part A</th>
<th>Part B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency:</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour:</td>
<td>straw yellow</td>
</tr>
<tr>
<td>Specific gravity (g/cm³):</td>
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</tr>
<tr>
<td>Brookfield viscosity (mPa·s):</td>
<td>1000 (shaft 1 - rev. 5)</td>
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<tr>
<td>Storage:</td>
<td>24 months in original unopened packing at a temperature between +5°C and +30°C</td>
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<tr>
<td>Hazard classification according to EC 99/45:</td>
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<tr>
<td>Before use consult the “Safety instructions” paragraph and the information on the packaging and safety data sheet.</td>
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<tr>
<td>Mixing ratio:</td>
<td>Part A : Part B = 1 : 1</td>
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<td>Consistency of the mix:</td>
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<td>Specific gravity of the mix (g/cm³):</td>
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<td>Workability at +23°C:</td>
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<tr>
<td>Complete hardening:</td>
<td>12-24 hours</td>
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