

Technical Data Sheet

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Properties:

AKEMI® Repair Resin is a mixture of unsaturated polyester resins dissolved in styrene and a special adhesive agent. The product is distinguished by the following qualities:

- highly liquid consistency, thus good wetting of glass fiber products
- fast hardening (30-40 minutes)
- very good adhesion on synthetic materials (e.g. polyester, rigid PVC), wood, stone, metal (iron, steel, aluminum) also in case of higher temperatures (up to 100°C).
- high mechanical and shatter strength of the laminates
- resistant to water, petrol, mineral oils, diluted lyes and acids

Application Area:

AKEMI® Repair Resin is used in industry, trade and hobby for repairing steel sheet parts rusted through or for reinforcing thin sheet metal combined with glass fiber mats or glass fabrics.

Instructions for Use:

1. The surface to be applied to must be derusted, dry, free of grease and oil and slightly roughened. Old coats of paint which have not hardened or thermoplastic acrylic paint must be removed.
2. For parts rusted through it is recommendable to hammer down the edges in order to prevent the repaired parts from jutting out from the remaining sheet metal surface.
3. The glass-fiber mats or fabric required for the work at hand are to be cut to the correct size first.
4. Add 1 - 4 g of hardener paste red to 100 g of resin (1 g of hardener corresponds to 4 - 5 cm of paste when squeezed out of the screw-top tube).
5. The two components are thoroughly mixed until a homogeneous shade of colour is attained. The mixture remains workable for approx. 4 - 14 minutes.
6. a) For repairing parts rusted through the prepared resin mixture is first put on the edges of the hole with a brush and then glass fiber or cloth is applied and pressed on it. The resin mixture is as well carefully spread on the remaining area of the fiber glass mat or cloth.
b) For reinforcing sheet metals, the resin mixture is first spread on the prepared surface, the prepared fiber glass mat or cloth is put on it and is soaked carefully with the resin mixture with a brush.
7. Use a laminating roller, preferably one made of teflon, to improve perfusion and to remove any air bubbles.
8. After 30 to 40 minutes the resin is hardened to such an extent that the surface can be further processed:
 - a) grinding of overlapping edges
 - b) levelling uneven areas with AKEMI® Body Filler No. 4 or Super Soft Filler.
8. Then you can add further layers of glass-fiber mat or fabric wet-on-wet, as required.
9. Warmth accelerates the hardening reaction and the cold delays it.
10. Tools can be cleaned with AKEMI® Nitro Dilution.

Special Notes:

- Use AKEMI® Liquid Glove to protect your hands.
- Apply filler in a short interval after grinding of metal surfaces to guarantee good adhesion.
- If more than 4% of hardener is used, it will reduce the quality of the finished product and surface drying may be negatively affected.

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- If less than 1% of hardener is used, hardening will be delayed. At low temperatures hardening will be incomplete and the surface will remain very sticky.
- If you are doing laminating work which requires several layers, use glass-fiber mat and glass-fiber fabric alternatively or work wet-on-wet to avoid the risk of delaminating.
- Parts which are to come into contact with foodstuffs should first be allowed to harden at room temperature and then be left for another two hours at 60 - 70°C.
- Hardened resin can no longer be removed with solvents. This can only be achieved mechanically or using high temperatures (>200°C).
- If properly worked, the hardened resin is not dangerous to health.

Technical Data:

Colour:	reed green
Density:	approx. 1.35 g/cm ³
Viscosity:	1800 – 2000 mPas

Working time/min.:
a) at 20°C

1% of hardener	12 – 14
2% of hardener	6 – 8
3% of hardener	5 – 6
4% of hardener	4 – 5

b) with 2% of hardener

at 10°C	12 – 14
at 20°C	6 – 8
at 30°C	4 – 5

**Material consumption with
AKEMI glass fiber products:**

a) glass-fiber mat 300 g/m ² :	1200 – 1500 g/m ²
b) glass-fiber fabric 240 g/m ² :	400 – 600 g/m ²
c) glass-fiber veil 40 g/m ² :	900 – 1200 g/m ²

Storage:

If stored in dry and cool condition (5-25°C/41-77°F) in its closed original container at least 12 months from production.

Health & Safety:

Read Safety Data Sheet before handling or using this product.

Important Notice:

The above information is based on the latest stage of development and application technology. Due to a multiplicity of different influencing factors, this information – as well as other oral or written technical advises – must be considered as non-binding hints. The user is obliged in each particular case to conduct performance tests, including but not limited to trials of the product, in an inconspicuous area or fabrication of a sample piece.

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