

Technical Instruction Sheet

1/3

Characteristics: 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 and thus good wetting of glass fiber products
- fast hardening (30-40 minutes)
- very good adhesion on metal (iron, steel, aluminium), wood, stone and various synthetic materials (e.g. rigid PVC, polyester) 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.

Field of Application: 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 treated must be derusted, degreased, dry, dustless and slightly roughened. All prior coats both unhardened lacquers and thermoplastic acrylic enamels 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. Glass fiber mats or cloths which are used for this work have to be cut to size.
 4. Add 1 to 4 g of red hardener paste to 100 g of resin (4 to 5 cm of paste pressed out of the screw tube correspond to 1 g).
 5. Both components are mixed until a homogeneous shade of colour is achieved. The mixture can be worked for about 4 to 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 mat 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. For better moistening and for smoothing out air bubbles, the surface should be treated with a laminating roller; one made of teflon would be best suited.
 7. 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 Autobody Filler No. 4 or Filler Super Soft).
 8. The hardening process is accelerated by heat and delayed by cold.
 9. Tools can be cleaned with AKEMI Nitro-Dilution.

- Special Hints:**
- Use AKEMI Liquid Glove to protect your hands.
 - Apply filler in a short interval after grinding of metal surface to guarantee good adhesion.
 - Hardener portions higher than 4 % reduce adhesion and deteriorate surface drying.
 - Hardener portions less than 1 % delay hardening; low temperatures may completely avoid the hardening process, in this instance the surface will remain tacky.
 - When laminating in several layers one should use alternately glass fiber mats and glass fabrics or a wet-in-wet technique in order to avoid the risk of delamination.
 - Parts which later on will get in contact with food should be stored at a

Technical Instruction Sheet

2/3

temperature of 60-70°C for 2 hours after hardening at room temperature.

- Once hardened, the resin can no longer be removed by solvents. Removal is only possible mechanically or by higher temperatures (> 200°C).
- Being worked properly, the hardened resin is generally recognized as not injurious to health.

Safety Measures: see EC Safety Data Sheet

Technical Data:

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

Material Consumption:

a) AKEMI Fiberglass Mat 300 g/m ²	1200-1500 g/m ²
b) AKEMI Fiberglass Cloth 240 g/m ²	400- 600 g/m ²
c) AKEMI Glass Fiber Tissue 50 g/m ²	900-1200 g/m ²

Working time / min.:

a) at 20°C

1% of hardener:	14 - 16
2% of hardener:	7 - 9
3% of hardener:	5 - 6
4% of hardener:	4 - 5

b) with 2% of hardener

at 10°C:	12 - 14
at 20°C:	7 - 9
at 30°C:	3 - 4

Shelf life: 1 year approx. if stored in cool place free from frost in its tightly closed original container.

Notice: The above information is based on the latest stage of our 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.

