Technical Data Sheet

Properties:

AKEMI® Metal Bond 101 is a thixotropic, solvent-free 2-component epoxy resin adhesive with modified polyamine hardener.

The product is distinguished by the following properties:
- slow skin forming time
- excellent spot-weldability
- corrosion is prevented from occurring at welds
- the original degree of rust resistance is maintained
- fewer spot welds
- low shrinkage and minimal inner tension in the adhesive layer
- excellent weather-resistance
- good electrical insulation
- good thermal stability
- suitable for bonding solvent-sensitive substrates, e.g. polystyrene,
- ABS, etc.
- alternative to tin soldering

Application Area:

AKEMI® Metal Bond 101 is used as an adhesive for bonding steel, aluminum and glass fiber-reinforced plastics e.g. GFRP, CFRP etc.

Instructions for Use:

1. Parts to be bonded must be clean, free of oil and grease.
2. Abrade surface to be bonded with medium grit paper (P360), then wipe clean.
3. Fit AKEMI® Metal Bond 101 in a 400 ml 2:1 2K piston gun.
4. Balance cartridge.
5. Attach the static mixer nozzle.
6. Apply AKEMI® Metal Bond 101 to one surface only, press parts together with finger pressure only.
7. Alternatively apply AKEMI® Metal Bond 101 onto a solid worktop, e.g. Pull Off Layer and add AKEPOX® colouring paste drop by drop until the desired shade has been achieved.
8. Mix AKEMI® Metal Bond 101 and colouring paste properly until a homogenous shade has been achieved.
9. Apply the coloured mixture with a spatula to one surface only or to the rebuilt area.
10. Join surfaces together.
11. Can be welded-through within 50 to 70 minutes.
12. After 3 to 5 hours AKEMI® Metal Bond 101 can be sanded or painted.
13. High temperatures increase speed of cure whereas lower temperatures retard the cure.
14. Maximum final strength will be achieved in 7 days.

Special Notes:

- For professional use only.
- Within the EU: Subject to the self-service prohibition regulation and shall only be sold by specialised sales outlets.
- For proper waste disposal the container must be completely emptied.
- Recycling in accordance with the guidelines of EU Decision 97/129 EC on the Packaging Directive 94/62/EC.

Technical Data:

Base:	epoxy resin
Colour:	green grey
Density:	approx. 1.52 g/cm³
Smell:	characteristic
Tensile strength:	20 - 30 N/mm² (DIN 53455)

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Bending strength:	50 - 60 N/mm² (DIN 53452)
E-modulus:	5500 - 6000 N/mm²
Temperature resistance:	-40°C - +160°C
Thermal stability:	60 - 70°C for thermal or physical loaded bondings, 100 – 110°C for not loaded bondings
Working time:	
at 10°C:	50 - 60 minutes
at 20°C:	20 - 30 minutes
at 30°C:	8 - 12 minutes
at 40°C:	5 - 7 minutes
Chemical resistance:	
Water absorption	< 5% (DIN 53495)
Saline solution 10%	resistance
Sea water	resistance
Ammonia 10%	resistance
Sodium hydroxide 10%	resistance
Hydrochloric acid 10%	resistance
Acetic acid 10%	limited resistance
Formic acid 10%	limited resistance
Petrol	resistance
Heavy fuel oils	resistance
Lubricating oil	resistance

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 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 trails of the product, in an inconspicuous area or fabrication of a sample piece.

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