

Technical Data Sheet

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Properties:

AKEMI® AKENOVA® XL PANEL BOND is a stress-compensating 1-component adhesive based on polyhybrid technology which hardens by humidity.

The product is characterized by the following properties:

- full-surface bonding, easy application with a tooth trowel
- high initial adhesion (High Tack)
- high bonding strength
- elastic bonding joint for higher stress compensation
- adheres to humid surfaces
- adheres to many surfaces without primer application
- vertical and horizontal bonding (not suited for floors)
- good workability
- almost odourless
- free of solvents, silicones and isocyanate
- temperature resistant from -25°C up to 80°C (77°F up to 176°F), briefly up to 120°C/248°F)
- resistant to UV, humidity and weathering
- suitable for indoor and outdoor use
- partially demountable
- paintable

Application Area:

AKEMI® AKENOVA® XL PANEL BOND is an innovative adhesive that is ideal for stress-compensating, full-surface, non-polishable bonding of large-size ceramic tiles with cement-coated rigid foam building boards indoors. Suitable for bonding natural stone, various large panels or wall coverings indoors (e.g. natural stone veneers with a back coating) to mineral, metallic or wooden surfaces. Suitable for walls, worktops, counters, recesses and kitchen splashbacks. The adhesive facilitates the bonding of larger components due to its initial strength. After hardening, the product shows excellent adhesion on silicate surfaces (e.g. concrete, glass) and SPC (stone polymer composite). A primer coat is necessary for bonding in humid conditions (see primer table).

Instructions for use:

1. Contact surfaces must be clean and free of grease and dust. Use AKEMI® Cleaner A for natural and artificial stone, tiles ceramics, glass, unpainted wood and metals; use AKEMI® Cleaner I for plastics and painted surfaces.
2. Working temperature +5°C to +35°C (41°F to 95°F).
3. For larger surface, both surfaces to be bonded must be pre-wetted. For particularly vapour-tight materials (glass, metal, tiles etc.), care should be taken to ensure that no closed adhesive surface is created. The adhesive must be interrupted by a small channel at least every 5 cm. This ensures that the air humidity can act on the adhesive and the resulting fractional products are removed. Air humidity is necessary for the adhesive to harden completely; if this is excluded, hardening is strongly delayed.
4. Parts should be bonded withing 10 - 15 minutes; smoothen joints with AKEMI® Smoothing Agent.
5. The skin formation time of the product is 10 to 20 minutes. It depends on the humidity, the moisture content of the bonded parts, the ambient temperature and the components. Complete hardening also depends on the layer thickness: 2.0 to 2.5 mm on the first day.

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Caution: in the case of a high layer thickness, hardening can be significantly delayed. For thin adhesive joints or when bonding vapour-proof materials (e.g. metal, ceramics, glass) or for bondings where there is only a small surface area exposed to air humidity, both bonding surfaces must be moistened shortly before bonding. Otherwise, hardening to the core is significantly delayed and can take several weeks.

6. Tools can be cleaned with AKEMI® Cleaner A or I.

Special Notes:

- For professional use only.
- Not suitable for natural stone, unless it has been pre-treated with AKEMI® Anti-Stain Coating 2015.
- After removing the product, immediately reattach the protective film and seal the container tightly.
- The bond is not a load-bearing element and does not contribute to structural strength. All components attached to the bond must also be anchored to load-bearing elements.
- Absorbent surfaces can absorb components from the product, which may lead to discolouration.
- The adhesive is only load-bearing once it has completely hardened.
- Before bonding, ensure that the product is compatible with the materials to be bonded and that no changes (e.g. discolouration) or damage occur. This also includes materials that are within the sphere of influence of the reaction products (evaporation).
- If other products (e.g. sealants, paints, varnishes, adhesives, cleaners etc.) are used in the area of influence after applying AKENOVA® XL PANEL BOND, it must also be ensured that no changes (discolouration) or damage to AKENOVA® XL PANEL BOND occur.
- The bonded workpieces should be fixed in place until the adhesive has completely hardened. The fixings and supports must be left in place for 15 - 20 minutes until the maximum initial strength has been achieved.
- The specified initial strength varies depending on the substrate and surface and can therefore only be used as a guide.
- No or only limited adhesion to plastics containing plasticizers, PE, PP, PTFE; in these cases, a preliminary test is necessary.
- Moistening the adhesive parts can promote hardening.
- Temperatures above 80°C (176°F) may cause discolouration on the adhesive surface.
- Hardened adhesive can only be removed mechanically; not hardened adhesive is best removed with AKEMI® Cleaner A or I, depending on the surface.
- Can be removed mechanically with AKEMI® Music Square Wire and AKEMI® Music Wire Handle.
- 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.

Primer table:

For bonding applications not exposed to humidity, the product generally shows good adhesion properties. If the bond, especially on absorbent surfaces, is exposed to humidity, prior treatment with a primer is mandatory. The user must first ensure adhesion a sample surface.

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Surface	Recommendation AKEMI® Primer	
	Without moisture load	With moisture load
Ceramics (e.g. Dekton®), glass, tile, fine stoneware	without primer	without primer
Concrete	without primer	AP 70
Quartz	without primer	AP 10
Solid Surface	without primer	AP 30
Plexiglas	without primer	AP 30
Bare iron	without primer	AP 20
Galvanized iron	without primer	AP 20
Bare aluminium	without primer	AP 20
Anodized aluminium	without primer	AP 20
Brass	without primer	AP 20
Stainless steel	without primer	AP 20

Technical Data:

Colour: white
 Consistency: creamy
 Density (20°C/68°F): approx. 1.5 g/cm³
 Skin formation time: 10 - 20 min
 Can be loaded: after approx. 48 h
 Final hardness (DIN EN ISO 868:2003): approx. 40 Shore A
 Complete hardening (20°C/68°F, 50% RLF): approx. 2 mm after 24 h
 Tensile strength (DIN EN ISO 527-3 type 5): approx. 1.5 N/mm² (approx. 218 psi)
 Elongation at break (DIN EN ISO 527-3 type 5): approx. 300%
 Shrinkage: -
 Initial strength: approx. 25 kg/m²

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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