

AKELUX Repair System PRO

Instructions for Use

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I. System Description

The AKELUX Repair System is a complete system for the high-quality repair of surfaces and defects on natural and artificial stone (such as marble, granite, quartz) as well as ceramics. AKELUX Repair System uses the light-hardening compound material technology and is designed for professional craftsmen and users.

II. Areas of application

The AKELUX Repair System is suitable for the high-quality and professional repair of all natural and artificial stone as well as ceramics in the interior and exterior:

- Surface scratches > 0.5 mm depth
- Chipping of edges
- Holes and bouncers
- Cracks > 0.5 mm depth
- Corner cut-outs
- Defects caused during installation or processing
(not to be used for damage affecting the statics)

III. Repair Process

The success of the repair process depends on the proper use of all materials, tools and accessories:

- Check all system components before starting work.
- Read all of the separate instruction manuals before starting a repair.
- Working temperature: 12 - 28°C

Before starting: The damage must be analysed fundamentally in order to achieve an optimal result. In the following, a distinction is made between edge damage, holes as well as scratches and cracks.

A. Repair of edges

Instructions for use in the event of a break-off or chipping of an edge (e.g. kitchen counter-top, window sill, bathroom, stair tread):

1. Mill out the damaged area and remove all loose parts and dust. Milling can be done manually or mechanically, for example with a Dremel and matching diamond grinding head.
2. Clean the damaged area thoroughly with AKELUX Cleaner.

3. Apply AKELUX Primer and allow to dry for approx. 60 seconds to ensure a permanent chemical bond between natural and artificial stone or ceramics and the AKELUX repair materials.
4. Ceramic shards that differ greatly from the decor can now be covered with a very thin layer of AKELUX Opaquing Agent. This layer must then be cured for 15-60 seconds with the AKELUX LED Powerlight.

IMPORTANT:

- Thicker layers may lead to incomplete hardening.
- If a work step does not lead to a covering success, repeat the application after hardening.

5. Mask the damaged area at the edge with transparent tape to be able to check the degree of filling. Then apply AKELUX Filler transparent liquid or AKELUX Filler transparent gel crystal for the first filling.
6. Cover damaged area with AKELUX Transparent Film or, in the case of textured surfaces, with a surface structure stamp (see p. 7) and harden 15-60 s/cm² with AKELUX LED Powerlight.

IMPORTANT:

- Follow the instructions for use of the AKELUX LED Powerlight.
- For larger damaged areas, move the AKELUX LED light source slowly over the damaged area and extend the hardening time depending on the size of the damage.
- Do not press on the film or stamp and do not create air pockets.

7. If necessary, mix AKELUX Filler transparent liquid with different coloured AKELUX Fillers on the AKELUX Mixing Plate (max. 50% colour portion) and adapt as closely as possible to the object colour. Use fine screening to reproduce the colour structure of the natural and artificial stone or ceramics. Harden each colour shade for approx. 60 seconds to prevent mixing of the individual colours.

8. Carefully remove excess material with AKELUX Planer. For limestone, we recommend the use of cuttlebone.

This step is not necessary when using a surface structure stamp.

IMPORTANT:

- Always check AKELUX Planer for damage to the planing surface before use.
- If micro-holes appear on the surface after removal, fill with AKELUX Filler transparent liquid, cover with AKELUX Transparent Film and harden 15-60 s/cm² with AKELUX LED Powerlight.

- Place AKELUX Silicone Abrasive Cloth on the polishing block and wet grind the damaged area in the sequence 2400-3200-4000.

This step is not necessary when using a surface structure stamp.

IMPORTANT:

- For dark stones with black components (e.g. Nero Assoluto), raster the edge of the damage with AKELUX Retouching Pen to create a harmonious transition.

- Apply AKELUX Polishing Paste to the repair area. Polish manually with a polishing cloth or the felt side of the AKELUX Grinding/Polishing Block or mechanically (e.g. Dremel with felt wheel).

- Optional: To imitate glossy structures or surfaces, apply AKELUX Clear Coat very thinly to natural and artificial stone or ceramics, to achieve a perfect finish. Subsequently cover with AKELUX Transparent Film or with a surface structure stamp and cure with AKELUX LED Powerlight 15-60 seconds.

B. Repair of holes

Instructions for use in case of a hole (e.g. kitchen countertop, window sill, bathroom, flooring, stair tread):

1. Mill out the damaged area and remove all loose parts and dust. Milling can be done manually or mechanically, for example with a Dremel and matching diamond grinding head.
2. Clean the damaged area thoroughly with AKELUX Cleaner.
3. Apply AKELUX Primer and allow to dry for approx. 60 seconds to ensure a permanent chemical bond between natural and artificial stone or ceramics and the AKELUX repair materials.
4. Ceramic shards that differ greatly from the decor can now be covered with a very thin layer of AKELUX Opaquing Agent. This layer must then be cured for 15-60 seconds with the AKELUX LED Powerlight.

IMPORTANT:

- Thicker layers may lead to incomplete hardening.
- If a work step does not lead to a covering success, repeat the application after hardening.

5. Apply AKELUX Filler transparent liquid or AKELUX Filler transparent gel crystal for initial filling.

6. Cover damaged area with AKELUX Transparent Film or, in the case of textured surfaces, with a surface structure stamp (see p. 7) and harden 15-60 s/cm² with AKELUX LED Powerlight.

IMPORTANT:

- Follow the instructions for use of the AKELUX LED Powerlight.
- For larger damaged areas, move the AKELUX LED light source slowly over the damaged area and extend the hardening time depending on the size of the damage.
- Do not press on the film or stamp and do not create air pockets.

7. If necessary, mix AKELUX Filler transparent liquid with different coloured AKELUX Fillers on the AKELUX Mixing Plate (max. 50% colour portion) and adapt as closely as possible to the object colour. Use fine screening to reproduce the colour structure of the natural and artificial stone or ceramics. Harden each colour shade for approx. 15-60 seconds to prevent mixing of the individual colours.

8. Carefully remove excess material with AKELUX Planer. For limestone, we recommend the use of cuttlebone.

This step is not necessary when using a surface structure stamp.

IMPORTANT:

- Always check AKELUX Planer for damage to the planing surface before use.
- If micro-holes appear on the surface after removal, fill with AKELUX Filler transparent liquid, cover with AKELUX Transparent Film and harden 60 s/cm² with AKELUX LED Powerlight.

9. Place AKELUX Silicone Abrasive Cloth on the polishing block and wet grind the damaged area in the sequence 2400-3200-4000.

This step is not necessary when using a surface structure stamp.

IMPORTANT:

- For dark stones with black components (e.g. Nero Assoluto), raster the edge of the damage with AKELUX Retouching Pen to create a harmonious transition.

10. Apply AKELUX Polishing Paste to the repair area. Polish manually with a polishing cloth or the felt side of the AKELUX Grinding/Polishing Block or mechanically (e.g. Dremel with felt wheel).

11. Optional: To imitate glossy structures or surfaces, apply AKELUX Clear Coat very thinly to natural and artificial stone or ceramics, to achieve a perfect finish. Subsequently cover with AKELUX Transparent Film or with a surface structure stamp and cure with AKELUX LED Powerlight 15-60 seconds.

C. Repair of scratches

Instructions for use in case of a scratch or crack (e.g. kitchen countertop, window sill, bathroom, flooring, stair tread):

1. Mill out the damaged area and remove all loose parts and dust. Milling can be done manually or mechanically, for example with a Dremel and matching diamond grinding head.
2. Clean the damaged area thoroughly with AKELUX Cleaner.
3. Apply AKELUX Primer and allow to dry for approx. 60 seconds to ensure a permanent chemical bond between natural and artificial stone or ceramics and the AKELUX repair materials.
4. Ceramic shards that differ greatly from the decor can now be covered with a very thin layer of AKELUX Opaquing Agent. This layer must then be cured for 15-60 seconds with the AKELUX LED Powerlight.

IMPORTANT:

- Thicker layers may lead to incomplete hardening.
- If a work step does not lead to a covering success, repeat the application after hardening.

5. Apply AKELUX Filler transparent liquid or AKELUX Filler transparent gel crystal for initial filling.
6. Cover damaged area with AKELUX Transparent Film or, in the case of textured surfaces, with a surface structure stamp (see p. 7) and harden 15-60 s/cm² with AKELUX LED Powerlight.

IMPORTANT:

- Follow the instructions for use of the AKELUX LED Powerlight.
- For larger damaged areas, move the AKELUX LED Powerlight slowly over the damaged area and extend the hardening time depending on the size of the damage.
- Do not press on the film or stamp and do not create air pockets.

7. If necessary, mix AKELUX Filler transparent liquid with different coloured AKELUX Fillers on the AKELUX Mixing Plate (max. 50% colour portion) and adapt as closely as possible to the object colour. Use fine screening to reproduce the colour structure of the natural and artificial stone or ceramics. Harden each colour shade for approx. 15-60 seconds to prevent mixing of the individual colours.
8. Carefully remove excess material with AKELUX Planer. For limestone, we recommend the use of cuttlebone.
This step is not necessary when using a surface structure stamp.

IMPORTANT:

- Always check AKELUX Planer for damage to the planing surface before use.
- If micro-holes appear on the surface after removal, fill with AKELUX Filler transparent liquid, cover with AKELUX Transparent Film and harden 15-60 s/cm² with AKELUX LED Powerlight.

9. Place AKELUX Silicone Abrasive Cloth on the polishing block and wet grind the damaged area in the sequence 2400-3200-4000.

This step is not necessary when using a surface structure stamp.

IMPORTANT:

- For dark stones with black components (e.g. Nero Assoluto), raster the edge of the damage with AKELUX Retouching Pen to create a harmonious transition.

10. Apply AKELUX Polishing Paste to the repair area. Polish manually with a polishing cloth or the felt side of the AKELUX Grinding/Polishing Block or mechanically (e.g. Dremel with felt wheel).

11. Optional: To imitate glossy structures or surfaces, apply AKELUX Clear Coat very thinly to natural and artificial stone or ceramics, to achieve a perfect finish. Subsequently cover with AKELUX Transparent Film or with a surface structure stamp and cure with AKELUX LED Powerlight 15-60 seconds.

D. Creating a surface structure stamp (imprint) for structured surfaces

To imitate structured surfaces with the AKELUX System, it is necessary to use a transparent surface stamp instead of the Transparent Film.

Please note that an exact filling must be ensured here, as in this case no planer, sanding cloth can be used after hardening.

1. Shake AKEMI Release Agent and apply thinly with a cloth to a suitable and clean surface and allow to dry.
2. Polish the surface with a clean cloth.
3. Apply AKELUX Filler transparent liquid to the pre-treated surface and allow to harden with the AKELUX LED Powerlight 45-60 seconds.
4. Now carefully separate the hardened stamp from the surface with the help of a spatula or a thin knife blade.

5. Before repair, treat the structured side of the stamp again with AKEMI Release Agent according to points 1 and 2.
6. Remove residues of AKEMI Release Agent from the stone surface with AKELUX Cleaner.

For the creation of a surface structure stamp scan QR code or watch the video for step-by-step video instructions at <https://youtu.be/5hSR-YtVNEg>:

SCAN ME:



IV. Special Notes

- Before starting work, check all system components in question, especially the AKELUX LED Powerlight, as well as the planing surface of the AKELUX Planer.
- Always ensure that the AKELUX materials are fully hardened with the AKELUX LED Powerlight for at least 15-60 seconds per cm².

IMPORTANT:

- Not hardened AKELUX materials cannot maintain their defined properties and turn yellow

- Correct and rework defects immediately in one work step.
- Apply AKELUX Primer to the AKELUX repair material for adhesion on the entire joint surfaces of the stone. This will help you achieve optimum bonding properties.
- Wash out AKELUX Silicone Abrasive Cloth well after use and allow to dry. This prolongs the readiness for use.
- Remove unsatisfactory retouching results immediately:
 - a) remove with solvent before light hardening.
 - b) after light hardening, grind out with a hand grinder.
- Protect all materials as well as the treated damaged area from direct sunlight. Prevents uncontrolled polymerisation of the material.
- When working with the AKELUX Planer, observe the red pressure point and always stay on the damaged area. Do not cut against the edge of the material. This way you will achieve the desired material reduction without affecting the surrounding area.
- Handle the AKELUX Planer with care and check it for functionality before starting work (e.g. the planer can be used on both sides).

V. Product Overview and Description

AKELUX Sets

Product	Area of application	Size	SU	Art.No.		
AKELUX Repair System PRO complete kit based on UV technology in a portable case of elegant design, includes all articles of the AKELUX system, especially AKELUX LED-Powerlight, an extra strong high tech LED light emitter with touch display, power supply unit and world plug for extremely fast hardening	Repair of small damaged areas (edges, holes, scratches) on kitchen worktops, countertops and window sills made of natural and artificial stone (s.a. marble, granite, quartz) as well as ceramics. Enables the stone industry to effect small repair work and thus avoids an additional grinding and polishing process of the complete stone surface. Helps the professional processor of natural and artificial stone to quickly and safely repair small damages, especially if an installation has already been done. The set allows repair work on all stone colours and structures due to use of all colours of the AKELUX fillers contained.	1 pc	1	62000		

AKELUX Cleaning

Product	Area of application	Size	SU	Art.No.		
AKELUX Cleaner transparent ethyl alcohol dilution	For the efficient cleaning of damaged areas.	150 ml bottle	5	62014		

AKELUX Adhesive Layer

Product	Area of application	Size	SU	Art.No.		
AKELUX Primer 1-component liquid in a practical application pen	For the creation of the chemical compound of stones with silicon components and filler.	1 ml pen	5	62013		

AKELUX Filler, liquid

Product	Area of application	Size	SU	Art.No.		
AKELUX Filler transparent liquid UV-hardening, transparent, liquid filler in handy application syringe Colour: transparent MAGIC CC 2200	To repair small damaged areas (edges, holes, scratches) on kitchen worktops, countertops and window sills made of natural and artificial stone (s.a. marble, granite, quartz) as well as ceramics.	3 ml syringe	5	62001		

AKELUX Filler, gel-like

Product	Area of application	Size	SU	Art.No.		
AKELUX Filler UV-hardening, gel-like fillers in handy application syringes	To repair small damaged areas (edges, holes, scratches) on kitchen worktops, countertops and window sills made of natural and artificial stone (s.a. marble, granite, quartz) as well as ceramics. The colours white CC 1130 (Art.No. 62072), black CC 1020 (Art.No. 62077), beige CC 1720 (Art.No. 62074), grey CC 1830 (Art.No. 62075), grey CC 1840 (Art.No. 62076) and brown CC 2060 (Art.No. 62073) are particularly suitable for XXL ceramics.					
Colour:	Colour Code:					
transparent gel crystal		3 ml syringe	5	62071		
black	1020	2 ml syringe	5	62077		
black	1040	2 ml syringe	5	62010		
white	1130	2 ml syringe	5	62072		
white	1140	2 ml syringe	5	62004		
beige	1720	2 ml syringe	5	62074		
grey	1830	2 ml syringe	5	62075		
grey	1840	2 ml syringe	5	62076		
brown	2030	2 ml syringe	5	62009		
brown	2060	2 ml syringe	5	62073		
green		2 ml syringe	5	62005		
yellow		2 ml syringe	5	62006		
blue		2 ml syringe	5	62007		
red		2 ml syringe	5	62008		
AKELUX Opaquing Agent UV-hardening, gel-like filler in handy application syringe	For covering dark surfaces when a light-coloured top coat is to be repaired above.	3 ml syringe	5	62070		

AKELUX Coating

Product	Area of application	Size	SU	Art.No.		
AKELUX Clear Coat UV-hardening clear coat Colour: transparent	To create a glossy surface on which no mechanical polishing is possible, e.g. on glazed tiles.	5 ml bottle	5	62069		

AKELUX Emitter

Product	Area of application	Size	SU	Art.No.		
AKELUX LED-Powerlight extra strong high tech LED light emitter with touch display and world plug	For the extremely fast hardening of all UV-hardening AKELUX materials.	1 pc	1	62078		
AKELUX Protective Shield Powerlight transparent protective shield made of plastic	Eye protection to be fixed to the AKELUX LED-Powerlight (Art.No. 72078).	1 pc	1	62079		
AKELUX Protective Glasses Powerlight high-quality plastic glasses	Eye protection against UV-radiation.	1 pc	1	62080		

AKELUX Surface Treatment / Accessories

Product	Area of application	Size	SU	Art.No.		
AKELUX Silicone Abrasive Cloth silicone-containing cloth with micro-abrasives	For wet grinding of the area to be repaired.	1 pc grain size 2400	5	62025		
		1 pc grain size 3200	5	62026		
		1 pc grain size 4000	5	62027		
AKELUX Grinding/Polishing Block multifunctional working block	For the optimal grinding of the damaged area (with AKEMI Silicone Abrasive Cloth) and high gloss polishing with the felt side.	1 pc	5	62023		
AKELUX Polishing Paste	For high gloss polishing of the damaged area.	bottle	5	62029		
AKELUX Planer handy special planer made of plastic	Takes away excess material on repaired area in order to reach the same level as the rest of the stone surface. Makes sure that the polish of the surrounding stone is not affected.	1 pc	5	62048		
AKELUX Blade for Planer	Spare blade for AKELUX Planer (Art.No. 62048).	1 pc	5	62022		
AKELUX Retouching Pen acrylic varnish pen	To minimize the optical difference between the repaired and surrounding area of dark stones.		5	62030		
Release Agent high-quality, polymer-strengthened, solvent-free release agent based on a wax emulsion	Release layer for the creation of a surface structure stamp for the repair of structured or rough surfaces. This release layer does not leave any filler residues when the surface structure is copied using an impression stamp.	150 ml bottle	1	62081		
AKELUX Transparent Film transparent film (9x6 cm)	For the surface covering of the damaged area before UV-hardening. In this way the repaired area is levelled and the AKELUX LED Light Emitter is protected against soiling by AKELUX fillers.	1 pc	5	62031		
AKELUX Dental Spike top for AKELUX Filler	For efficient filling of the damaged area.	1 pc	15	62034		
AKELUX Application Instrument	For specific application of AKELUX Structure or mixed colours on the damaged area.	1 pc	5	62036		
AKELUX Microfibre Cloth high-quality, blue microfibre cloth, 39 x 39 cm	For repolishing surfaces wetted with Release Agent or use as a cleaning cloth after repair work.	1 pc	1	63323		

VI. Storage

Light-hardening fillers and adhesion promoters (primers) must be stored at room temperature in the range of 2°C to 28°C. Temperatures above or below this range may affect workability. Temperatures above or below this range may affect the workability of the materials.

The storage stability of the light-hardening filling materials (AKELUX Filler transparent liquid, AKELUX transparent gel crystal and coloured AKELUX Filler) is 4 years.

The storage stability of the AKELUX primer is 3 years.

All other materials, equipment and auxiliaries are subject to the usual adapted storage.

**IMPORTANT:
Keep out of reach of children!**

VII. Safety

Read Safety Data Sheets before handling or using the products (www.akemi.com).

VIII. Important Notice

The product was developed for use in natural and artificial stone as well as ceramics and must be applied according to the instructions for use. The manufacturer accepts no liability for damage resulting from misuse or improper application. In addition, the user is obliged to check the product for suitability and possible use for the intended purposes on his own responsibility before using it, especially if these purposes are not listed in the instructions for use.

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.