

## Technical Data Sheet

Page 1 of 3

**Properties:**

Coloured AKEPOX® 5010 is a gel-like, solvent-free, two-component adhesive based on an epoxy resin containing a cyclophatic polyamine hardener. The product is characterized by the following properties:

- huge variety of colours
- very low tendency to yellow
- easy dosing and mixing by use of cartridge system
- high creeping strength due to gel-like consistency
- very low shrinkage during the hardening process and therefore low tensions in the bonding layer
- weather-resistant bondings
- good thermal stability: approx. 60-70°C for bonded parts not exposed to weight, approx. 100-110°C for bonded parts not exposed to weight
- good dimensional stability of the bonding layer
- low tendency to fatigue
- very good alkali-stability, thus the adhesive is very well suited to bond concrete
- excellently suited for bonding gas-impermeable materials as it is a solvent-free product
- suited for bonding load-bearing construction parts
- good electrical insulating property
- good adhesion on slightly humid stones
- suited for bonding materials which are sensitive to solvents (e.g. expanded polystyrene, ABS)
- After being hardened the product is harmless to health upon contact with food products – certified by an external German testing institute classification according to the Berufsgenossenschaft der Bauwirtschaft (Accident Prevention and Insurance Association of the German Building Industry): GISCODE: RE 01

**Application Area:**

Coloured AKEPOX® 5010 is mainly used in the stone-working industry for colour adjusted bondings of natural stone (marble, granite), technical ceramics as well as artificial stone or building materials (terrazzo, concrete) in the visual range. Because of its supple, gel-like consistency the product has a high creeping strength on vertical surfaces. It is nevertheless possible to attain thin adhesive joints. Other materials can also be glued with Coloured AKEPOX® 5010, e.g. plastics (hard PVC, polyester, polystyrene, ABS, polycarbonates), paper, wood, glass and many other materials. Coloured AKEPOX® 5010 is not suitable for the gluing of polyolefins (polyethylene, polypropylene), silicones, hydrocarbon fluorides (Teflon), soft PVC, soft polyurethane, butyl rubber and metal.

**Instructions for Use:**

1. Thoroughly clean and slightly roughen surfaces to be bonded.
2. Remove the clasp from the cartridge and put the cartridge in the gun; work the grip until material emerges from both openings; then eventually screw up the mixing nozzle.
3. Both components must be thoroughly mixed when working without mixing nozzle.
4. The mixture remains workable for approx. 20 - 30 minutes (20°C). After approx. 6 - 8 hours (20°C) the bonded parts may be moved. After 12 – 16 hours (20°C) approx. they may be further processed. Maximal stability after 7 days (20°C).
5. Tools can be cleaned with AKEMI® Nitro-Dilution.
6. The hardening process is accelerated by heat and delayed by cold.

TDS 04.16

## Technical Data Sheet

Page 2 of 3

### Special Notes:

- Only if the right mixing ratio is kept, optimal mechanical and chemical properties can be obtained. A surplus of adhesive or hardener has the effect of a softener and can cause discolouration in the marginal zone.
- An adhesive is no longer to be used if it has already thickened or is jellying.
- The product is not to be used at temperatures below 10°C because it will not sufficiently harden.
- At constant temperatures above 50°C the hardened adhesive tends to yellowing.
- The hardened adhesive can no longer be removed by means of solvents. This can only be achieved mechanically or by applying higher temperatures (> 200°C).
- If the resin has been correctly worked it presents no hazard to health when the hardening process is completed.
- The A-component slightly tends to crystallize (honey effect). The product can be made workable again by warming it up.
- The stability of the bonding depends on the natural stone to be bonded: silicate-bound stones react better than carbonate-bound stones.

### Technical Data:

1. Colour (A and B): transparent CC 2200, white CC 1130+1100, cream CC 1670, grey CC 1830+1880, black CC 1000+1020, beige CC 1720+1735, khaki CC 1920, brown CC 2060
2. Density (A and B): approx. 1.16 g/cm<sup>3</sup>
3. Working time:
 

mixture of 100 g component A	at 10°C: 60 – 70 minutes
+ 50 g of component B:	at 20°C: 20 – 30 minutes
	at 30°C: 15 – 20 minutes
	at 40°C: 5 – 10 minutes
4. Mechanical properties:
 

Bending strength DIN 53452:	60 – 70 N/mm <sup>2</sup>
Tensile strength DIN 53455:	30 – 40 N/mm <sup>2</sup>
5. Chemical Resistance
 

Water absorption:	< 0.5 %
Sodium Chloride Solution 10%:	stable
Salt water:	stable
Ammonium 10%:	stable
Soda lye 10%:	stable
Hydrochloric acid 10%:	stable
Acetic acid 10%:	conditionally stable
Formic acid 10%:	conditionally stable
Petrol:	stable
Diesel oil:	stable
Lubricating oil:	stable

### Storage:

2 years approx. under cool conditions in the firmly closed original container.

TDS 04.16

**Technical Data Sheet**

Page 3 of 3

**Health & Safety:** Read Material 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.