

Technical Data Sheet

Page 1 of 3

Properties: AKEPOX® 5010 Coloured is a gel-like, solvent-free, two-component adhesive based on an epoxy resin containing a cycloaliphatic 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
- good electrical insulating property
- good adhesion on slightly humid stones
- suited for bonding materials which are sensitive to solvents (e.g. expanded polystyrene, ABS)

Application Area: AKEPOX® 5010 Coloured is mainly used in the stone-working industry for colour adjusted bondings of natural stone (marble, granite), Techno 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 AKEPOX® 5010 Coloured, e.g. plastics (hard PVC, polyester, polystyrene, ABS, polycarbonates), paper, wood, glass and many other materials. AKEPOX® 5010 Coloured 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.

Special Notes: - Suitable for bonding of load-bearing construction parts, however, the relevant standards such as DIN 18516 part 1 and part 3 or DIN 2304 must be observed during application.

TDS 04.20

Technical Data Sheet

- 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).
- 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 stone reacts better than carbonate-bound stone.

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/cm³
3. Working time:
 mixture of 100 g component A
 + 50 g of component B:

| | |
|----------|-----------------|
| at 10°C: | 60 - 70 minutes |
| 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 ² |
| Tensile strength DIN 53455: | 30 - 40 N/mm ² |
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 |
6. Hardening process (Shore D hardness) of a 2 mm layer at 20°C:

| | | | | | | |
|------------|------------|------------|------------|------------|-------------|------------|
| <u>4 h</u> | <u>5 h</u> | <u>6 h</u> | <u>7 h</u> | <u>8 h</u> | <u>24 h</u> | <u>7 d</u> |
| -- | 44 | 67 | 74 | 76 | 82 | 83 |

Technical Data Sheet

Page 3 of 3

- Storage:** If stored in dry and cool condition (5-25°C/41-77°F) in its closed original container at least 24 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.