

Sika AnchorFix®-3+

High-performance, 2-part epoxy anchoring adhesive

Product Description

Solvent-free, thixotropic, two part, epoxy resin-based, high performance anchoring adhesive.

Uses

For the fixing of non-expanding anchors in the following:

Structural work:

- Rebar / steel reinforcement anchoring in new and refurbishment works
- Threaded rods
- Bolts and special fastening / fixing systems

Mechanical and electrical services installation (heating and ventilating, sanitary, etc)

- Anchoring of supports for ducting and equipment

Metalwork, carpentry:

- Fixing of handrails, balustrades and supports
- Fixing of railings
- Fixing of window and door frames

In the following substrates:

- Concrete
- Hard natural and reconstituted stone
- Solid rock
- Hollow and solid masonry
- Steel
- Wood

Characteristics / Advantages

- Long Open Time
- Can be used in damp concrete
- High load capacity
- Non-sag, even overhead
- Styrene-free
- Excellent adhesion to the substrate
- Shrinkage-free hardening
- Standard guns can be used (with the 250ml cartridge)
- Low odour
- Low wastage

Construction



Product Data

Form

| | | |
|----------------|-----------------|---------------------|
| Colours | Part A: | clear / translucent |
| | Part B: | grey |
| | Part A+B mixed: | light grey |

| | |
|------------------|--|
| Packaging | 250 ml standard cartridge, 12 per box. Pallet: 60 boxes with 12 cartridges. |
|------------------|--|

Storage




Storage Conditions / Shelf-Life 12 months from date of production if stored properly in original unopened, sealed and undamaged packaging in cool and dry conditions at temperatures between +5°C and +30°C. Protect from direct sunlight.

All Sika AnchorFix®-3+ cartridges have the expiry date printed on the label.

Technical Data

| | |
|----------------|----------------------------|
| Density | Part A: 1.18 kg/l |
| | Part B: 1.71 kg/l |
| | 1.45 kg/l (part A+B mixed) |

Curing Speed

| Temperature  | Open Time T _{gel}  | Curing Time T _{cur}  |
|---|--|--|
| > +40°C | 10 minutes | 7 hours |
| +20°C - +35°C | 15 minutes | 14 hours |
| +10°C - +20°C | 35 minutes | 30 hours |
| +5°C - +10°C | 75 minutes | 45 hours |
| 0°C - +5°C | -- * | 70 hours |

*Min. cartridge temperature = +5°C

| | |
|-----------------|-------------------------|
| Sag Flow | Non-sag, even overhead. |
|-----------------|-------------------------|

| | |
|------------------------|-----------|
| Layer Thickness | 5 mm max. |
|------------------------|-----------|

Mechanical / Physical Properties

Compressive Strength

(According to ASTM D695-96)

| Curing time | +5°C | +23°C | +40°C |
|-------------|------------------------|------------------------|------------------------|
| 16 hours | ~11 N/mm ² | ~94 N/mm ² | ~108 N/mm ² |
| 1 day | ~17 N/mm ² | ~104 N/mm ² | ~115 N/mm ² |
| 3 days | ~ 86 N/mm ² | ~112 N/mm ² | ~123 N/mm ² |
| 7 days | ~ 89 N/mm ² | ~114 N/mm ² | ~127 N/mm ² |

+/- 5 N/mm²

Pull out Strength

Pull-out tests (according to standard NF P 18-822):
Anchoring of rebar in slabs:

| | |
|---------------------|--------|
| Conditions: | |
| Steel quality | B500B |
| Rebar diameter | 12 mm |
| Drill hole diameter | 22 mm |
| Anchoring depths | 120 mm |

Test result: Ultimate load >70 kN*, slippage < 0.6 mm
*Maximum load of the testing machine

Pull-out tests (according to ETAG 001): unconfined
Anchoring of threaded rods in slabs:

| | |
|---------------------|---------|
| Conditions: | |
| Steel quality | 12.9 |
| Threaded rod | M12 |
| Drill hole diameter | 14.3 mm |
| Anchoring depths | 110 mm |

Test result: $F_{RK, log}^t > 75$ kN, concrete failure

Resistance

Thermal Resistance -40°C to +45°C
+45°C long term

System Information

Application Details

Consumption / Dosage

Material consumption per anchor in ml

| Anchor ∅ mm | Drill ∅ mm | Drill hole depth in mm | | | | | | | | | | | | | | | | | |
|-------------------|------------------|------------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 8 | 90 | 110 | 120 | 130 | 140 | 160 | 170 | 180 | 200 | 210 | 220 | 240 | 260 | 280 | 300 | 350 | 400 |
| 8 | 10 | 3 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 11 | 12 |
| 10 | 12 | 4 | 5 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 8 | 8 | 9 | 10 | 10 | 11 | 12 | 14 | 15 |
| 12 | 14 | 5 | 6 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 10 | 10 | 11 | 11 | 12 | 13 | 14 | 16 | 18 |
| 14 | 18 | 9 | 10 | 11 | 14 | 14 | 15 | 18 | 19 | 20 | 22 | 23 | 24 | 26 | 28 | 30 | 32 | 37 | 42 |
| 16 | 18 | 9 | 10 | 11 | 13 | 14 | 15 | 17 | 18 | 19 | 21 | 22 | 23 | 26 | 28 | 30 | 32 | 36 | 40 |
| | 20 | 10 | 12 | 12 | 15 | 16 | 17 | 20 | 21 | 22 | 24 | 25 | 26 | 29 | 31 | 33 | 35 | 40 | 46 |
| 20 | 24 | 12 | 13 | 14 | 15 | 16 | 18 | 22 | 24 | 26 | 28 | 30 | 32 | 36 | 38 | 42 | 48 | 58 | 66 |
| | 25 | 18 | 19 | 21 | 23 | 24 | 26 | 30 | 31 | 32 | 36 | 38 | 40 | 44 | 46 | 50 | 54 | 64 | 72 |
| 24 | 26 | 24 | 25 | 28 | 30 | 33 | 35 | 40 | 43 | 45 | 50 | 55 | 58 | 60 | 65 | 70 | 75 | 100 | 125 |

The indicated filling quantities are calculated without wastage. Wastage 10 - 50%.

Substrate Quality

Mortar and concrete must be older than 28 days.

Substrate strength (concrete, masonry, natural stone) must be verified.

Pull-out tests must be carried out if the substrate strength is unknown.

The anchor hole must always be clean, dry, free from oil and grease, etc.

Loose particles must be removed from the holes.

Application Conditions / Limitations

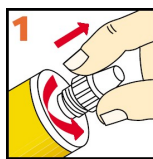
| | |
|------------------------------|--|
| Substrate Temperature | 0°C min. / +40°C max. |
| Ambient Temperature | 0°C min. / +40°C max. |
| Material Temperature | Sika AnchorFix®-3+ must be used at a temperature of between +5°C and +30°C. |
| Dew Point | Substrate temperature during application must be at least 3°C above dew point to avoid condensation. |

Application Instructions

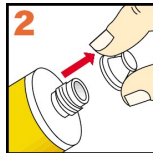
Mixing Part A : part B = 1 : 1 by volume

Mixing Tools *Getting the cartridge ready:*

250 ml

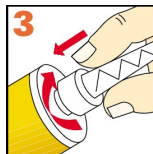


Unscrew and remove the cap

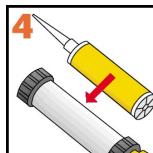


250 Cartridge:

- Pull out the plug
- Cut the two plugs of the cartridge



Screw on the static mixer

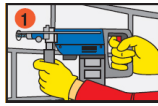


Place the cartridge into the gun and start application

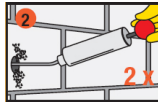
When work is interrupted the static mixer can remain on the cartridge after the gun pressure has been relieved. If the resin has hardened in the nozzle when work is resumed, a new nozzle must be attached.

Application Method / Tools

General Remarks:



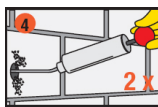
Drilling of hole with an electric drill to the diameter and depth required. Drill hole diameter must be in accordance with anchor size.



The drill hole must be cleaned with a blow pump or by compressed air, starting from the bottom of the hole. (at least twice)
oil-free compressors shall be used

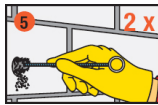


The drill hole must be thoroughly cleaned with the special steel brush (brush at least twice). The diameter of the brush must be larger than the diameter of the drill hole.

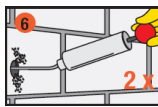


The drill hole must be then be cleaned again with a blow pump or by compressed air, starting from the bottom of the hole. (at least twice again)

oil-free compressors shall be used

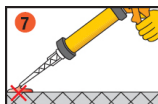


The drill hole must be thoroughly cleaned with the special steel brush again (brush at least twice again). The diameter of the brush must be larger than the diameter of the drill hole.

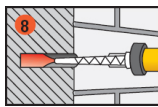


The drill hole must then be finally cleaned yet again with a blow pump or by compressed air, starting from the bottom of the hole. (at least twice)

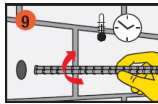
oil-free compressors shall be used



Pump approx. twice until both parts come out uniformly. Do not use this material. Release the gun pressure and clean the cartridge opening with a cloth.

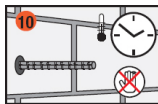


Inject the adhesive into the hole, starting from the bottom, while slowly drawing back the static mixer. In any case avoid entrapping air. For deep holes extension tubing can be used.



Insert the anchor with a rotary motion into the filled drill hole. Some adhesive must come out of the hole.

Important: the anchor must be placed within the open time.



During the resin hardening time the anchor must not be moved or loaded. Wash tools immediately with Sika® Colma Cleaner. Wash hands and skin thoroughly with warm soap water.

Cleaning of Tools

Clean all tools and application equipment with Sika® Colma Cleaner immediately after use. Hardened / cured material can only be removed mechanically.

Value Base

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Local Restrictions

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

Legal Notes

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.



Sika Australia Pty Limited
55 Elizabeth Street
Wetherill Park NSW 2164

Phone 1300 22 33 48
www.sika.com.au