

# Sika AnchorFix®-3001

High-performance, professional epoxy anchoring adhesive

Construction

## Product Description

Solvent-free, thixotropic, two part, epoxy resin-based, high performance anchoring adhesive for threaded rods and reinforcing bars in both cracked and un-cracked concrete.

## 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

### *Metalwork, carpentry:*

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

### *In the following substrates:*

- Concrete (cracked and un-cracked)
- Hard natural and reconstituted stone
- Solid rock
- Hollow and solid masonry
- Wood

## Characteristics / Advantages

- Long Open Time
- Can be used in damp concrete
- High load capacity
- ETA Approval available
- ICC-ES Approval available
- Drinking Water certified
- LEED Attestation available
- Fire resistance test report available
- Seismic testing available
- Styrene-free
- Excellent adhesion to the substrate
- Shrinkage-free hardening
- Standard guns can be used (with the 250ml cartridge)
- Low odour
- Low wastage



## Tests

### Approval / Standards

Approvals:



European Technical Approval ETAG 001 Part 5 Option 1

Galvanised anchor & stainless steel anchors M10 to M30 and rebars Ø10 to Ø 32 mm for cracked & non-cracked concrete including seismic factor

EC Cert. 1020-CPR-090-032737

ETA-14 / 0157



European Technical Approval ETAG 001 Part 5 TR023

Post installed rebar connections of the sizes Ø8 to Ø 40 mm

EC Cert. 1020-CPD-032640

ETA-14 / 0368

#### Fire resistance:

Test report from the CSTB institute

REPORT No 26054326/B

on Sika AnchorFix®-3001 injection systems in conjunction with concrete reinforcing bar (Ø 8 to 40mm) and subjected to fire exposure



IAPMO Evaluation Report

Galvanised anchor & stainless steel anchors M10 to M30 ( $\frac{3}{8}$  to 1  $\frac{1}{4}$  inch)

Rebars T10 to T32 (No. 3 to No. 10)

Testing according to AC 308 standards.

Report Number: 0292



ICC ES Report


Galvanised anchor & stainless steel anchors M10 to M30 ( $\frac{3}{8}$  to 1  $\frac{1}{4}$  inch)

Rebars T10 to T32 (No. 3 to No. 10)


Testing according to AC 308 standards.

Report Number: ESR-3608

**Drinking Water Approval:**


Drinking Water System Components NSF / A NSI 61
K-8319

**LEED Attestation:**


Test report from eurofins
REPORT No G23222_4

## Product Data

### Form

<b>Colours</b>	Part A:	off-white
	Part B:	dark grey / black
	Part A+B mixed:	grey

<b>Packaging</b>	250 ml standard cartridge, 12 per box. Pallet: 60 boxes with 12 cartridges.
	400 ml side by side cartridge, 12 per box. Pallet: 50 boxes with 12 cartridges.
	600 ml side by side cartridge, 12 per box. Pallet: 34 boxes with 12 cartridges.
	1500 ml side by side cartridge, 5 per box. Pallet: 50 boxes with 5 cartridges.

### Storage

**Storage Conditions / Shelf-Life** 24 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 +20°C. Protect from direct sunlight.

All Sika AnchorFix®-3001 cartridges have the expiry date printed on the label.

### Technical Data

<b>Density</b>	Part A: ~1.2 kg/l
	Part B: ~1.8 kg/l
	~1.70 kg/l (part A+B mixed)

### Curing Speed

Temperature 	Open Time T <sub>gel</sub> 	Curing Time T <sub>cur</sub> 
+40°C	3 minutes	3 hours
+35°C - +40°C	4 minutes	4 hours
+30°C - +35°C	6 minutes	5 hours
+25°C - +30°C	8 minutes	6 hours
+22°C - +25°C	11 minutes	7 hours
+15°C - +22°C	15 minutes	8 hours
+10°C - +15°C	20 minutes	12 hours
+4°C - +9°C	-*	24 hours

\*Min. cartridge temperature = +10°C

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

**Layer Thickness** ~7 mm max.

### Mechanical / Physical Properties

<b>Compressive Strength</b>	~85 N/mm <sup>2</sup> (7days, +20°C)	(According to ASTM D695)
<b>Flexural Strength</b>	~45 N/mm <sup>2</sup> (7days, +20°C)	(According to ASTM D790)
<b>Tensile Strength</b>	~23 N/mm <sup>2</sup> (7days, +20°C)	(According to ASTM D638)
<b>E-Modulus</b>	Compressive: ~5'000 N/mm <sup>2</sup>	(According to ASTM D695)
	Tensile: ~5'500 N/mm <sup>2</sup>	(According to ASTM D638)

**Design** For design details, please refer to the separate documentation provided: "Technical Documentation Sika AnchorFix®-3001" Ref: 870 43 10

## Resistance

**Thermal Resistance** -40°C to +43°C  
+43°C long term

## System Information

## Application Details

**Consumption / Dosage** Material consumption per anchor in ml

Thread Ø	Hole Ø	Theoretical volume [ml] @ a certain hole depth [mm]																	
		mm	80	90	110	120	130	140	160	170	180	200	210	220	240	260	280	300	350
M8	10	3.4	3.8	4.6	5.0	5.4	5.9	6.7	7.1	7.5	8.4	8.8	9.2	10.1	10.9	11.7	12.6	14.7	16.8
M10	12	4.4	5.0	6.1	6.6	7.2	7.7	8.8	9.4	9.9	11.0	11.6	12.1	13.2	14.3	15.4	16.5	19.3	22.0
M12	14	5.6	6.3	7.7	8.4	9.1	9.8	11.2	11.8	12.5	13.9	14.6	15.3	16.7	18.1	19.5	20.9	24.4	27.9
M14	16	6.9	7.7	9.5	10.3	11.2	12.0	13.8	14.6	15.5	17.2	18.1	18.9	20.6	22.4	24.1	25.8	30.1	34.4
M14	18	11.2	12.6	15.4	16.8	18.2	19.6	22.4	23.8	25.2	28.0	29.4	30.8	33.6	36.4	39.2	42.0	49.0	56.0
M16	18	7.8	8.8	10.8	11.8	12.7	13.7	15.7	16.7	17.6	19.6	20.6	21.6	23.5	25.5	27.4	29.4	34.3	39.2
M16	20	12.6	14.1	17.3	18.8	20.4	22.0	25.1	26.7	28.3	31.4	33.0	34.5	37.7	40.8	44.0	47.1	55.0	62.8
M20	22	10.8	12.2	14.9	16.2	17.6	18.9	21.6	23.0	24.3	27.0	28.4	29.7	32.4	35.1	37.8	40.5	47.3	54.0
M20	24	16.6	18.6	22.8	24.8	26.9	29.0	33.1	35.2	37.3	41.4	43.5	45.5	49.7	53.8	58.0	62.1	72.5	82.8
M20	25	19.7	22.1	27.1	29.5	32.0	34.4	39.4	41.8	44.3	49.2	51.7	54.1	59.0	64.0	68.9	73.8	86.1	98.4
M24	26	14.2	16.0	19.6	21.4	23.1	24.9	28.5	30.3	32.0	35.6	37.4	39.2	42.7	46.3	49.8	53.4	62.3	71.2
M27	30	19.4	21.9	26.7	29.2	31.6	34.0	38.9	41.3	43.7	48.6	51.0	53.5	58.3	63.2	68.0	72.9	85.1	97.2

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

**The filled quantity can be monitored during injection with the help of the scale on the cartridge label.**

## 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.

Threaded rods and rebars have to be cleaned thoroughly from any oil, grease or any other substances and particles such as dirt etc.

## Application Conditions / Limitations

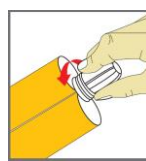
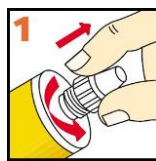
<b>Substrate Temperature</b>	+4°C min. / +40°C max.
<b>Ambient Temperature</b>	+4°C min. / +40°C max.
<b>Material Temperature</b>	Sika AnchorFix®-3001 must be used at a temperature of between +10°C and +30°C.
<b>Dew Point</b>	Substrate temperature during application must be at least 3°C above dew point to avoid condensation.

## Application Instructions

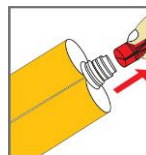
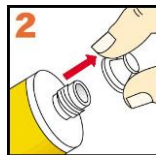
**Mixing** Part A : part B = 1 : 1 by volume

**Mixing Tools** *Getting the cartridge ready:*

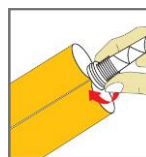
250 ml      400 / 600ml / 1500ml



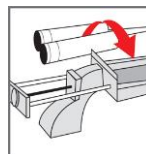
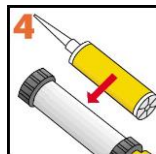
Unscrew and remove the cap



250 Cartridge:  
- Pull out the plug  
400 / 600 & 1500ml Cartridges:  
- Pull out the red plug



Screw on the static mixer



Place the cartridge into the gun and start application

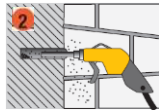
When work is interrupted the static mixer can remain on the cartridge after the gun pressure has been relieved. If the resin has hardened in the nozzle when work is resumed, a new nozzle must be attached.

## Application Method / Tools

### Anchors in solid masonry/concrete:



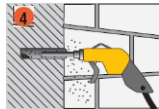
Drilling of hole with an electric drill to the diameter and depth required. Drill hole diameter must be in accordance with anchor size.



The drill hole must be cleaned with by compressed air, using an air lance, starting from the bottom of the hole. (at least twice) until return air stream is free of noticed dust. Oil-free compressors shall be used, minimum pressure:6 Bar (90 psi)



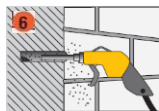
The drill hole must be thoroughly cleaned with the special steel brush (brush at least twice). The diameter of the brush must be larger than the diameter of the drill hole.



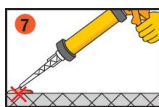
The drill hole must be then be cleaned again by compressed air, using an air lance, starting from the bottom of the hole. (at least twice again) until return air stream is free of noticed dust. Oil-free compressors shall be used, minimum pressure:6 Bar (90 psi)



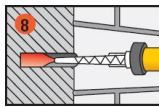
The drill hole must be thoroughly cleaned with the special steel brush again (brush at least twice again). The diameter of the brush must be larger than the diameter of the drill hole.



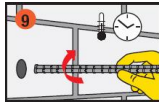
The drill hole must then be finally cleaned yet again by compressed air, using an air lance, starting from the bottom of the hole. (at least twice) until return air stream is free of noticed dust. Oil-free compressors shall be used, minimum pressure:6 Bar (90 psi)



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.

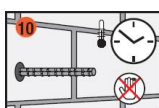


Inject the adhesive into the hole, starting from the bottom, while slowly drawing back the static mixer. In any case avoid entrapping air. For deep holes extension tubing can be used.



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.

**Important Note: Anchors in hollow blocks:**  
Do use Sika AnchorFix®-1 for hollow blocks.

## 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.

**It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.**



Sika Services AG  
Tüffenwies 16  
CH-8048 Zurich  
Switzerland

Phone +41 44 436 40 40  
Telefax +41 44 436 46 86  
www.sika.com

