

Sika AnchorFix®-2 Normal

Anchoring adhesive for medium to high loads

Product Description

Solvent- and styrene free, epoxy acrylate based, two part anchoring adhesive for normal/moderate climate conditions.

Uses

As a fast curing anchoring adhesive for all grades of:

- Rebars / reinforcing steel
- Threaded rods
- Bolts and special fastening systems
- Concrete (in cracked and non-cracked)
- Solid masonry
- Steel

Prior to any application, the suitability of the Sika AnchorFix® Adhesive for the substrate in terms of the desired bond strength, and for the prevention of surface staining or discolouration, must be confirmed by testing in a sample area. This is due to the wide variation of possible substrates, particularly in terms of strength, composition and porosity:

- Hard natural stone
- Solid rock

Characteristics / Advantages

- Fast curing
- Standard guns can be used
- Medium to high load capacity
- ETA Approval available
- Suitable for cracked concrete
- LEED Attestation available
- Non-sag, even overhead
- Styrene-free
- Low odour
- Low wastage

Construction



Tests

Approval / Standards

Approvals for threaded rods:



European Technical Approval ETAG 001 Part 5 Option 7

Galvanised anchor & stainless steel anchors M8 to M30 and rebars Ø8 to Ø 32 mm for non-cracked concrete

EC Cert. 1020-CPD-090-029805

ETA-13 / 0719



European Technical Approval ETAG 001 Part 5 Option 1

Galvanised anchor & stainless steel anchors M8 to M30 and rebars Ø8 to Ø 32 mm for cracked & non-cracked concrete

EC Cert. 1020-CPR-090-032534

ETA-14 / 0346

Approvals for rebars:



European Technical Approval ETAG 001 Part 5 TR023

Post installed rebar connections of the sizes Ø8 to Ø 32 mm

EC Cert. 1020-CPD-029807

ETA-13 / 0779

LEED Attestation:



Test report from eurofins

REPORT No G22816B_03

Product Data

Form

Colours	Part A:	light green
	Part B:	black
	Part A+B mixed:	light grey

Packaging	300 ml standard cartridge, 12 per box. Pallet: 60 boxes with 12 cartridges.
	350 ml standard cartridge, 12 per box. Pallet: 60 boxes with 12 cartridges.
	850 ml standard cartridge, 8 per box. Pallet: 50 boxes with 8 cartridges.



Storage

Storage Conditions / Shelf-Life	15 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 +25°C. Protect from direct sunlight. All Sika AnchorFix®-2 Normal cartridges have the expiry date printed on the label.
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Technical Data

Density	Part A: 1.60 - 1.75 kg/l Part B: 1.45 - 1.50 kg/l 1.65 - 1.75 kg/l (part A+B mixed)
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Curing Speed

Temperature 	Open Time T _{gel} 	Curing Time T _{cur} 
+30°C	4 minutes	35 minutes
+25°C - +30°C	5 minutes	40 minutes
+20°C - +25°C	6 minutes	50 minutes
+10°C - +20°C	10 minutes	85 minutes
+5°C - +10°C	18 minutes	145 minutes

*Min. cartridge temperature = +5°C

Sag Flow	Non-sag, even overhead.
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Layer Thickness	~5 mm max.
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Mechanical / Physical Properties

Compressive Strength	~70 N/mm ² (7days, +20°C)	(According to ASTM D695)
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Flexural Strength	~29 N/mm ² (7days, +20°C)	(According to ASTM D790)
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Tensile Strength	~15 N/mm ² (7days, +20°C)	(According to ASTM D638)
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E-Modulus	Compressive: ~7'000 N/mm ²	(According to ASTM D695)
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Tensile: ~3'800 N/mm ²	(According to ASTM D638)
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Design	For design details, please refer to the separate documentation provided: "Technical Documentation Sika AnchorFix®-2 Normal" Ref: 870 43 06
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Resistance

Thermal Resistance	Service Temperature range of the Cured Adhesive, ETAG 001, part 5: -40°C to +50°C* *Temperature Resistance of the Cured Adhesive, ETAG 001, part 5 +50°C long term +80°C short term (1 - 2 hours)
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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	400
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

Substrate Temperature	+5°C min. / +35°C max.
Ambient Temperature	+5°C min. / +35°C max.
Material Temperature	Sika AnchorFix®-2 Normal must be at a temperature of between +5°C and +30°C for application.
Dew Point	Beware of condensation! Substrate temperature during application must be at least 3°C above dew point.

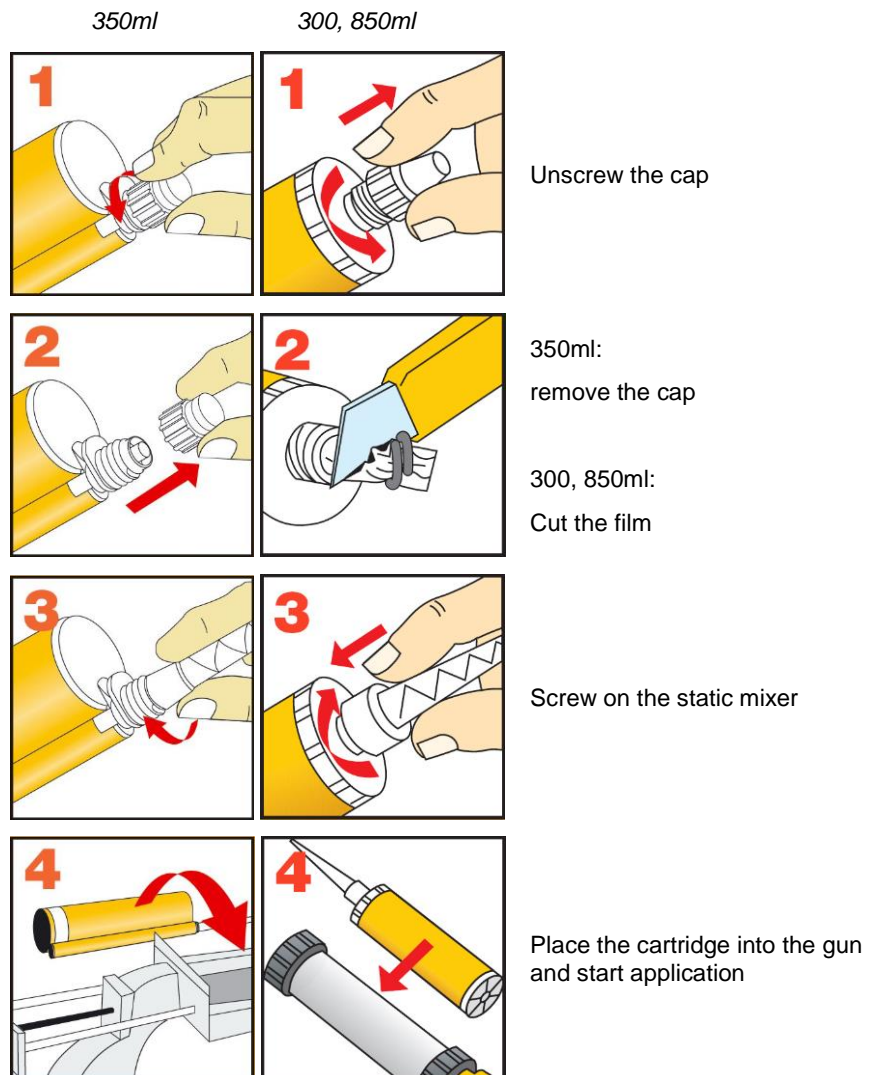
Application Instructions

Mixing

Part A : part B = 10 : 1 by volume

Mixing Tools

Getting the cartridge ready:



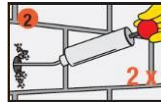
When the work is interrupted the static mixer can remain on the cartridge after the gun pressure has been relieved. If the resin has hardened in the nozzle when work is resumed, a new nozzle must be attached.

Application Method / Tools

Anchors in solid masonry/concrete:



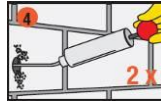
Drilling of hole with an electric drill to the diameter and depth required. Drill hole diameter must be in accordance with anchor size.



The drill hole must be cleaned with a blow pump or by compressed air, starting from the bottom of the hole. (at least 2x)
Important: use oil-free compressors!



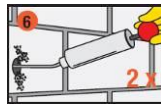
The drill hole must be thoroughly cleaned with the special steel brush (brush at least 2x). The diameter of the brush must be larger than the diameter of the drill hole.



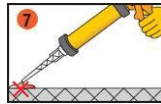
The drill hole must be cleaned with a blow pump or by compressed air, starting from the bottom of the hole. (at least 2x)
Important: use oil-free compressors!



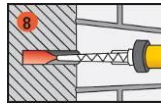
The drill hole must be thoroughly cleaned with the special steel brush (brush at least 2x). The diameter of the brush must be larger than the diameter of the drill hole.



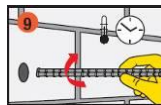
The drill hole must be cleaned with a blow pump or by compressed air, starting from the bottom of the hole. (at least 2x)
Important: use oil-free compressors!



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.

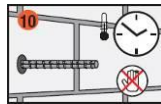


Inject the adhesive into the hole, starting from the bottom, while slowly drawing back the static mixer. In any case avoid entrapping air. For deep holes extension tubing can be used.



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 mechanically removed.

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.

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