

Sika AnchorFix®-1

Fast curing anchoring adhesive

Positioning Description

Solvent and styrene free two-component polyester anchoring adhesive.

Uses

As a fast curing anchoring adhesive for all grades of:

- Rebars / reinforcing steel
- Threaded rods
- Bolts and special fastening systems

In the following substrates:

- Concrete
- Solid masonry
- Hollow masonry
- Hard natural stone*
- Solid rock*

* Prior to any application in hard natural stone or solid rock, the suitability of Sika AnchorFix-1 for use with that substrate must be confirmed by testing, in terms of:

1. Bond strength
2. Risk of surface staining or discoloration.

This is due to the wide variation of possible substrates, particularly in terms of strength, composition and porosity.

Advantages

- Fast curing
- Fits any standard sealant cartridge gun
- Can be used at low temperatures
- High load capacity
- Non-sag, can be used overhead
- Styrene-free
- Low odour
- Low wastage
- ETAG approval available

Approvals / Standards

Approvals for Injection systems for use in hollow masonry:



European Technical Approval Guideline ETAG 029

Sika AnchorFix-1, a plastic sieve sleeve and an anchor rod with hexagon nut and washer in the sizes M8, M10, and M12 or internal threaded sockets in sizes M8, M10, and M12. The steel elements are made of zinc coated steel.

EC Cert. 0679-CPD-0777

ETA-12 / 0227

Approvals for Injection systems for use in concrete:



European Technical Approval Guideline ETAG 001 -1 & 5

Bonded injection type anchor made of galvanized steel for non-cracked concrete: Sizes M8, M10, M12, M16, M20 and M24

EC Cert. 1020-CPD-090-029816

ETA-13 / 0720



Product Data

Colours:

Comp. A: White, Comp. B: Black Comp. A + B mixed: light grey

Packaging :

300ml cartridge, 12 per box. 150ml cartridge, 20 per box.

Storage & Shelf Life:

Twelve (12) months from date of production when stored in unopened original packaging in cool and dry conditions at temperatures between +5°C and +25°C and out of direct sunlight. All Sika AnchorFix-1 cartridges have the 'best before' date printed on the label.

Technical Data

Density

1.63 kg/l (part A + B mixed)

Curing Speed

Curing speed temperature	Open time (T _{gel})	Curing time (T _{cur})
+30°C	4 minutes	35 minutes
+25°C - +30°C	4 minutes	40 minutes
+20°C - +25°C	5 minutes	50 minutes
+10°C - +20°C	6 minutes	85 minutes
+5°C - +10°C	10 minutes	145 minutes
+5°C	18 minutes	145 minutes
-10°C * **	30 minutes	24 hours

**For application at -10°C store cartridges at +5°C*

***This application is not covered by the scope of the product ETA or any other approval.*

Sag Flow

Non-sag, even overhead

Layer Thickness

Max. layer thickness: 3mm

Thermal Stability

Glass-transition Temperature (TG): +60°C (according to DIN EN ISO 6721-2)

Mechanical / Physical Properties

Compressive Strength

~ 60 N/mm² (7 days, +20°C)

(According to ASTM D695)

Flexural Strength

~ 28 N/mm² (7 days, +20°C)

(According to ASTM D790)

Tensile Strength

~ 12 N/mm² (7 days, +20°C)

(According to ASTM D638)

E-Modulus

Compressive: ~ 3500 N/mm²

(According to ASTM D695)

Tensile: ~ 4500 N/mm²

(According to ASTM D638)

Resistance

Thermal Resistance

Temperature resistance of the cured adhesive:
+50°C long term, +80°C short term (1 - 2 hours)



System Information

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 at the required strength. They do not need to be 28 days old.
- Substrate strength (concrete, masonry, natural stone) must be verified. Pull-out tests must be carried out if 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 by brush and blow-out pump.

Application Conditions / Limits

Substrate Temperature

- Substrate: -10°C to +40°C.
- Sika AnchorFix-1 must be at a temperature of between +5°C and +40°C for application by brush and blow out pump.

Ambient Temperature

- Ambient: -10°C to +40°C.
- Sika AnchorFix-1 must be at a temperature of between +5°C and +40°C for application.

Mixing Instructions

Getting the cartridge ready



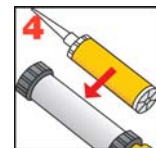
Unscrew and remove the cap.



Cut the film.



Screw on the static mixer.



Place the cartridge into a standard application gun and start application.

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

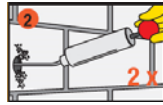


Application Method / Tools

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.

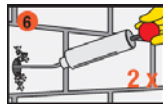


The drill hole must be cleaned with a blow pump or by compressed air, starting from the bottom of the hole. (at least 2x)

Important: use oil-free compressors!

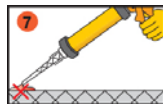


The drill hole must be thoroughly cleaned with the special steel brush (brush at least 2x). The diameter of the brush must be larger than the diameter of the drill hole.

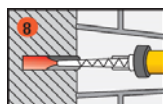


The drill hole must be cleaned with a blow pump or by compressed air, starting from the bottom of the hole. (at least 2x)

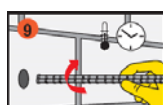
Important: use oil-free compressors!



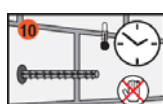
Pump approx. twice until both parts come out uniformly. Do not use this material. Release the gun pressure and clean the cartridge opening with a cloth.



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 Thinner C.

Wash hands and skin thoroughly with warm soap water.

Anchors in hollow blocks:



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

Note: with hollow material do not use rotary hammer drills.



The drill hole must be thoroughly cleaned with a round brush (brush at least 1x). The diameter of the brush must be larger than the diameter of the drill hole.



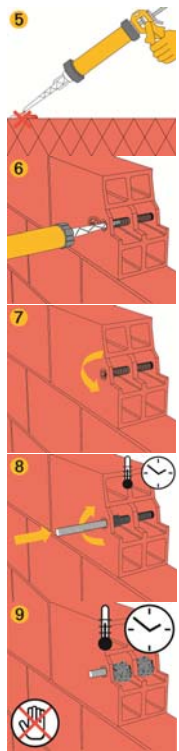
The drill hole must be cleaned after each cleaning step with a blow pump or by compressed air, starting from the bottom of the hole (pump at least 1x).

Important: use oil-free compressors!



Insert perforated sleeve completely into the drill hole.





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 perforated sleeve, starting from the bottom, while slowly drawing back the static mixer. In any case avoid entrapping air.

Close the cap from the perforated sleeve to avoid some escape of the resin during entering the steel rod.

Insert the anchor with a rotary motion into the filled perforated sleeve. Use the adequate steel rod size. 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 Thinner C. Wash hands and skin thoroughly with warm soap water.

Cleaning of Tools	Clean tools and application equipment with Sika Thinner C immediately after use. Hardened / cured material can only be mechanically removed.
Notes	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.
Safety Instructions	
Protective Measures	<ul style="list-style-type: none"> To avoid rare allergic reactions, we recommend the use of protective gloves. Change soiled work clothes and wash hands before breaks and after finishing work. Local regulations as well as health and safety advice on packaging labels must be observed. For further information refer to the Sika Safety Data Sheet which is available on request. If in doubt always follow the directions given on the pack or label.
Important Notes	<ul style="list-style-type: none"> Residues of material must be removed according to local regulations. Fully cured material can be disposed of as household waste under agreement with the responsible local authorities. Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the safety data sheet.

Legal Notes	<p>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.</p>
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