

PRODUCT DATA SHEET

Edition 05.2019/v1

CSC Master Format™ 03 64 23 (07 92 16)

EPOXY INJECTION GROUTING

Sika AnchorFix®-3001

HIGH-STRENGTH, HIGH-LOAD CAPACITY AND LOW-VOC, PURE EPOXY ANCHORING ADHESIVE WITH EXTENDED WORKINGTIME

Description	Sika AnchorFix®-3001 is a two component, pure epoxy anchoring adhesive. Using high quality, low-VOC and styrene-free technology, Sika AnchorFix®-3001 has been specifically designed to provide a high-strength, user-friendly and versatile adhesive for use in dry, wet or flooded conditions and on or into numerous base materials. The anchoring adhesive is suitable for medium and heavy loads in both structural and non-structural applications.	
Where to Use	▪ Anchoring of rebar or threaded rods in solid base materials (concrete, stone, fully grouted block). ▪ Grouting horizontally, vertically and overhead (refer to Limitations), where slow-setting allows extended working time. ▪ Suitable for deeper and scattered holes or applications where a fast-turnaround is not needed. ▪ Suitable for use as a ‘pick-proof’ sealant in secure or holding suites and similar facilities (horizontal use only) ▪ Grouting in external environments and where applications are subject to dynamic loads and vibrations. ▪ Anchoring structural steel to concrete, safety barriers, balcony stanchions, canopies, signs, hand rails, racking, machinery, masonry supports, stadium seats, reinforcing and starter bars.	
Advantages	▪ Styrene- free and low-VOC. ▪ Versatile material allows application as adhesive and anchoring gel. ▪ Sets up in dry, wet or flooded conditions. ▪ Cures down to 0 °C (32 °F) when material is conditioned to 5 °C (41 °F). ▪ Cures without exhibiting expansion pressures. ▪ Extended open and gel times accommodate anchoring in deep and scattered holes. ▪ Permits anchors close to free edges. ▪ Suitable for chemical anchors, threaded bars and reinforcing steel. ▪ Performs in both cracked and non-cracked concrete. ▪ Resistant to a wide range of chemicals, including aqueous solutions of aluminum chloride at saturation, aluminium nitrate at 10 % concentration, jet fuel, diesel fuel, domestic kerosene and many other substances at 75 °C (167 °F) while retaining at least 80 % of physical values (See Chemical Resistance Guide). ▪ Supports high loads	
Approvals/ Certifications	▪ ESR to AC308 by ICC-ES (ESR-3608) : approved for cracked and uncracked concrete ▪ ANSI/NSF Standard 61 approved for contact with potable water by IAPMO-R&T (file N-7858). ▪ Meets ASTM C881 (Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete Type I & IV, Class C, grade 3). ▪ Product qualified by The Road Authority (TRA) and approved by the Ministry of Transportation of Ontario (MTO) as listed in the 9.30.25 prequalification list for Stuctural Dowel Adhesives - Acrylic and Epoxy Resins. ▪ Ministère des Transports du Québec approved. ▪ Product recognized by the British Columbia Ministry of Transportation (BC MoT).	
Technical Data		
Packaging	250 mL (8.4 US fl. oz) single piston cartridge/12 per case 600 mL (20.2 US fl. oz) side by side cartridges/12 per case	
Colour	Bronze	
Shelf Life	24 months if stored properly in original and unopened packaging and in cool and dry conditions, out of direct contact with sunlight, at temperatures between 5 and 20 °C (41 and 68 °F). Pre-condition product to above 10 °C (50 °F) to ease application when using hand dispensers and working at lower temperatures.	
Mix Ratio	A:B = 1:1 by volume	

Properties at 20 °C (68 °F) and 50 % R.H. (unless specified otherwise)**Density ASTM D1875**

1.7 kg/L

Application**Temperature Resin & Substrate**

* 0→	5 °C	(32→	41 °F)
* 5→	10 °C	(41→	50 °F)
10→	15 °C	(50→	59 °F)
15→	20 °C	(59→	68 °F)
20→	25 °C	(68→	77 °F)
25→	30 °C	(77→	86 °F)
30→	35 °C	(86→	95 °F)
35→	40 °C	(95→	104 °F)
40 °C	(104 °F)		

Working Time

30 min
20 min
15 min
11 min
8 min
6 min
4 min
3 min

Loading Time

72 hrs
30 hrs
12 hrs
8 hrs
7 hrs
6 hrs
5 hrs
4 hrs
3 hrs

*Adhesive maintained at 5 °C (41 °F) minimum.

Compressive Strength ASTM D695

24 hours	59 MPa (8500 psi)
7 days	85 MPa (12 300 psi)

Compressive E-Modulus ASTM D695

7 days	5 GPa
--------	-------

Tensile Strength ASTM D638

1 day	18 MPa (2610 psi)
7 days	23.5 MPa (3400 psi)

Tensile Strength ASTM D638**(Elongation at Break)**

1 day	6.6 %
7 days	5.9 %

Tensile Modulus ASTM D638

1 day	5.7 GPa
7 days	5.5 GPa

Flexural Strength ASTM D790

24 hours	45 MPa (6525 psi)
----------	-------------------

Heat Deflection Temperature ASTM D790

7 days	49°C (120°F)
--------	--------------

Electrical Conductivity/Dissipation

5.1 [±] +09 Ωcm @ 500 V
5.4 [±] +09 Ωcm @ 1000 V
5.3 [±] +09 Ωcm @ 2000 V
5.0 [±] +09 Ωcm @ 4000 V

VOC (SCAQMD Rule 1168)

4.5 g/L

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

Design Data

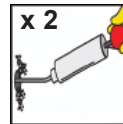
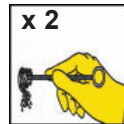
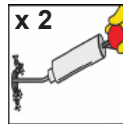
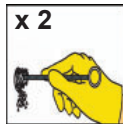
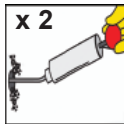
Please consult Specification Documents (available through contact with Sika Canada) for design data including anchorage, lap and splice lengths, ultimate tensile loads and shear stresses and fire resistance information.

HOW TO USE**Surface Preparation**

Surfaces must be clean and sound. Surfaces/holes may be dry, damp or wet. Remove dust, laitance, grease, oil, curing compounds, impregnations, waxes, foreign particles and disintegrated materials. Substrate strengths must be verified, with pull-out tests being conducted if strength is unknown.

Application**Solid Substrate Installation**

1. Drill the hole to the correct diameter and depth to suit the anchor, using a rotary percussion drill and carbide-tipped bit.

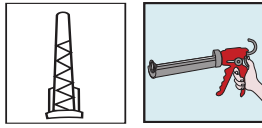


2. Thoroughly clean the hole in the above sequence. Use an air lance inserted into the back of the hole with the trigger depressed for 2 seconds, blow out all debris. The compressed air must be free from oil and water with a minimum pressure of 6 bar (90 psi).

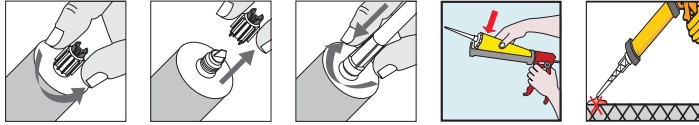
If using a hand pump for holes of 400 mm (16 in) deep or less, pump twice to achieve clean holes. If the hole collects water after the initial cleaning this water must be removed before injecting the resin.

3. Select an appropriate sized steel brush, ensuring it is in good condition and suited to the diameter of the drilled hole. Insert the brush to the back of the hole and pull out using a back and forth rotating motion to remove all loose friable material. Repeat the brushing operation.

Repeat the steps 2 and 3, finishing with step 2.



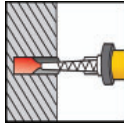
4. Select the appropriate static mixer nozzle for the installation. Also make ready a good quality dispensing gun, ensuring it is good working order and of sufficient mechanical advantage (at least 26:1) to extrude the anchoring adhesive. Recommended dispensers include: Cox "Ascot" or 'PPM 300X', 'PPM 750' manual dispensers and Cox 'PPA 300' or 'PPA 750' pneumatic dispensers. Wherever practical, use pneumatic dispensers for optimum ease of dispensing.



5. Unscrew and remove the protective cap. Attach the static mixer nozzle to the cartridge. Load the cartridge into the dispenser and trigger the dispenser until a uniform colour (no streaking) and consistency are achieved with unmixed material going to waste.

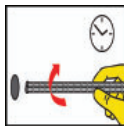
Note: The Q2 nozzle is in two sections. One section contains the mixing elements and the other section is an extension piece. Connect the extension piece to the mixing section by pushing the two sections firmly together until a positive engagement is felt.

Where called for, cut an extension tube to the depth of the hole and push onto the end of the static mixer, and for rebars 16 mm (5/8 in) diameter or more, fit the correct resin stopper to the end of the extension tube.



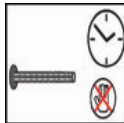
6. Insert the static mixer tip (resin stopper / extension tube if applicable) to the base of the hole. Begin to extrude the resin, under constant and uniform pressure and slowly withdraw the static mixer from the hole. Fill the hole to approximately $\frac{1}{2}$ to $\frac{3}{4}$ full and remove the static mixer tip completely.

Note: If dispensing is interrupted or altered, re-establish consistency of resin prior to continuing. When using a manual dispenser, release piston pressure by pressing thumb plate at every pause in extrusion.



7. Insert the threaded bar or reinforcing (both should be free from oil or other release agents) to the back of the hole using a back and forth rotating motion and ensuring all the threads are thoroughly coated. Adjust to the correct position within the stated working time.

Any excess resin should be expelled from the hole evenly around the steel element showing that the hole is full. This excess resin should be removed from around the opening to the hole before it sets.



8. Leave the anchor undisturbed until the appropriate loading time has been achieved, which will be dependent upon the substrate conditions and ambient temperatures.

9. Attach the fixture and tighten the nut to the recommended torque, DO NOT OVERTIGHTEN.

Clean Up	Collect with absorbent material. Dispose of in accordance with local disposal regulations. Uncured material can be removed with Sika® Epoxy Cleaner. Cured material can only be removed mechanically.
Limitations	▪ Sika AnchorFix®-3001 is not intended as a cosmetic or decorative material and when anchoring into porous substrates or reconstituted stone, staining may occur. Where this is of concern, it is recommended that Sika Canada be consulted for advice and discrete trial applications be undertaken and assessed before proceeding. ▪ Store and pre-condition material to above 10 °C (50 °F) to ease application when using manual dispensers; the higher the temperature the easier to dispense (a maximum storage and pre-conditioning temperature of 22 °C (71 °F) is recommended as working time is significantly reduced at this temperature and above). ▪ Minimum age of concrete must be 28 days, depending on curing conditions. ▪ Do not thin; solvents will prevent proper cure. ▪ Use for overhead anchoring applications only with written confirmation from Sika Canada. ▪ Standard and quality of dispenser will impact upon ease of extrusion, especially when using manual equipment; ensure the mechanical advantage is appropriate, pistons are correctly aligned and even pressure is achievable. ▪ Sika AnchorFix®-3001 must only be applied on or into substrates when they are frost-free.
Health and Safety Information	For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data. KEEP OUT OF REACH OF CHILDREN FOR INDUSTRIAL USE ONLY

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, within their shelflife. 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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

SIKA CANADA INC.

Head Office
601, avenue Delmar
Pointe-Claire, Quebec
H9R 4A9

Other locations
Toronto
Edmonton
Vancouver

1-800-933-SIKA
www.sika.ca

Certified ISO 9001 (CERT-0102780)
Certified ISO 14001 (CERT-0102791)