

Epoxy-acrylate-based resin cartridge system for anchoring, bonding and repairing

Uses

For concrete and solid stone typical uses are:

- Heavy load-carrying attachments in solid stone, concrete, porous concrete and light concrete.
- Attachment points close to the edge, since anchoring is free of expansion forces.
- Suitable as repair mortar or adhesive mortar for concrete components.
- Attachment of anchor rods, threaded collars, reinforcement bars, profiles etc.
- Suitable for attachment of facades, projecting roof, wooden constructions, metal constructions, metal profiles, consoles, railings, grills, sanitary fittings, pipe connections, cable runs etc.

Advantages

- Can be used in various solid stones.
- Can be used in Galvanised steel, stainless steel, high-corrosion resistant steel.
- Cartridge can be used up to the end of the validity date by replacing the static mixer or resealing cartridge with the sealing cap.
- Water-impermeable joint, i.e. no water can penetrate into the hole at the side of the adhesive compound.
- Accurate dosage of the compound.
- Secure anchoring in hollow brick; high load-bearing capacity.
- No expansion effect, allowing attachment points to be placed close to edges etc.

Instructions for use

Preparation

- For concrete, solid stone drill hole with percussion drill.
- Clean drill hole
- Screw static-mixer to cartridge.
- Use Lokfix DUR injection (application) gun.
- Squeeze out and discard compound until a homogeneous gray colour is obtained before use.
- Starting from the back end or the 'cul de sac' of the hole, fill completely with Lokfix DUR.
- Push anchor up to base of hole whilst turning it slightly.
- Observe hardening time.
- Install component, apply torque.

Reaction characteristics

Temperature	Curing		Curing end	
	Start			
+ 5°C	25 Min.	120 Min. to	240 Min.	
+ 10°C	15 Min.	80 Min. to	160 Min.	
+ 20°C	6 Min.	45 Min. to	90 Min.	
+ 30°C	4 Min.	25 Min. to	50 Min.	
+ 35°C	2 Min.	20 Min. to	40 Min.	

Description

Lokfix DUR is supplied as cartridge containing and epoxy acrylate base reacting resin mortar, with styrene.

Lokfix DUR should be applied with special application gun and static mixers.

Properties

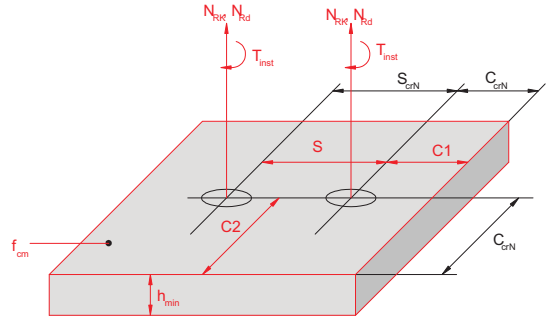
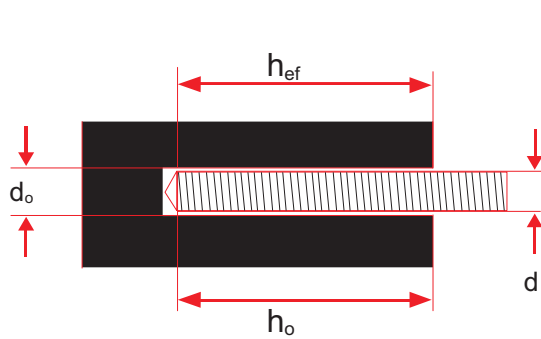
Density	: 1.68 Kg/dm ³
Tensile strength	: 11 N/mm ² (24 Hr)
Compressive strength	: 60 N/mm ² (24 Hr)
Temperature resistant up to	: 80°C

Fosroc Lokfix DUR

Mechanical / Physical properties

Design

Terminology and Abbreviations:



Safety factor for share loads 1,56 acc. to ETAG								
recommended loads								
Resin	Concrete		M8	M10	M12	M16	M20	M24
Load in every direction	P C30/35	F_{rec} [kN]	4.9	7.3	10.3	12.0	19.1	30.0
Installation parameters								
Minimum close edge distance to achieve NRK		$C_{cr,N}$ [mm]	80	90	110	130	170	215
Close edge distance(mm)		C [mm]	40	50	60	70	90	115
Minimum anchor spacing to achieve NRK(mm)		$S_{cr,N}$ [mm]	160	180	220	250	340	430
Anchor spacing (mm)		S [mm]	80	90	110	125	170	220
Effective anchorage depth (both length) (mm)		h_{ef} [mm]	80	90	110	125	170	220
Min. concrete thickness (mm)		h_{min} [mm]	130	140	160	175	220	270
Stud or bar nominal diameter (mm)		d [mm]	8	10	12	16	20	24
Minimum drilled hole diameter (mm)		d_o [mm]	10	12	14	18	24	28

Design values								
	Concrete/Steel		M8	M10	M12	M16	M20	M24
Characteristics tensile load(kN)	PC20/25	N_{RK} [kN]	12.3	18.4	26.0	30.2	48.1	75.0
Recommended load = NRK multiplied with a total safety factor		N_{Rd} [kN]	6.9	10.2	14.4	16,8	26.7	45.0

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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%.

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.

Application Instruction

Getting the cartridge ready:



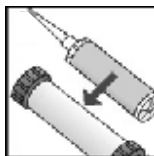
1. Unscrew and remove the cap



4. Screw on the static mixer



2. Pull out the plug



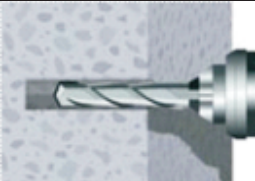
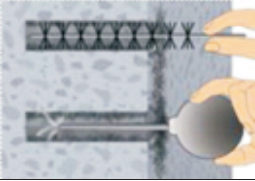

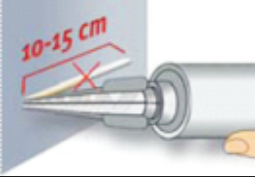
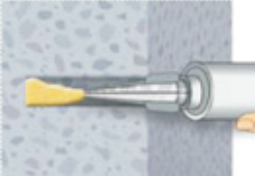

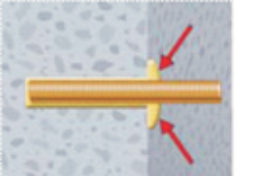
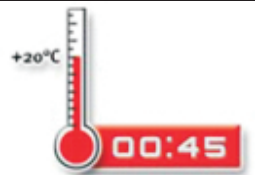

5. Place the cartridge into the gun and start application



3. Cut the film and remove the plug

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Application Method / Tools

1		Drill hole with percussion drill
2		Clean drill hole (blow out: 4x, brush out: 4x, blow out: 4x)
3		Screw mixer to cartridge
4		Squeeze out and discard until a obtained before use compound homogeneous gray color
5		Starting from the back end, fill hole completely with mortar
6		Push anchor up to base of hole whilst turning it slightly
7		Visual check of mortar filling
8		Observe hardening time
9		Install component, apply torque

Fosroc Lokfix DUR

Technical support

Fosroc offers a comprehensive range of high performance, high-quality concrete repair and construction products. In addition, Fosroc offers a technical support package to specifiers, end-users and contractors, as well as on-site technical assistance in locations all over the world.

Estimating

Supply

Lokfix DUR : 380 ml Cartridge

Lokfix DUR Injection Gun : One

Storage

Shelf life

Cartridges have a shelf life of 12 months if kept in a store at 5°C to max 25°C.

Storage conditions

Store in cold conditions at temperatures at 5°C to max 25°C

Additional Information

Fosroc manufactures a wide range of complementary products which include:

- waterproofing membranes & waterstops
- joint sealants & filler boards
- cementitious & epoxy grouts
- specialised flooring materials

Fosroc additionally offers a comprehensive package of products specifically designed for the repair and refurbishment of damaged concrete. Fosroc's 'Systematic Approach' to concrete repair features the following:

- hand-placed repair mortars
- spray grade repair mortars
- fluid micro-concretes
- chemically resistant epoxy mortars
- anti-carbonation/anti-chloride protective coatings
- chemical and abrasion resistant coatings

For further information on any of the above, please consult your local Fosroc office.

* Denotes the trademark of Fosroc International Limited

† See separate data sheet



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Lokfix DUR

Important note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Service. All Fosroc datasheets are updated on a regular basis. It is the user's responsibility to obtain the latest version.

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