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Technical Data Sheet

INDUCRET®-VK4065

Art.-No. 5 50048

Styrene-free epoxy anchoring grout

Description:
INDUCRET-VK4065 is a ready to use styrene-free epoxy acrylate anchoring resin. It is available in an easy to use coaxial cartridge system.

Primary Uses:
INDUCRET-VK4065 is used on concrete, solid masonry, solid rock and hard natural stone for fixing
- externally threaded rods
- anchor sockets
- concrete reinforcing bars
- securing profiled sections and bars.

Advantages:
- Styrene free – non hazardous
- ETA approval
- Expansion pressure not needed for anchoring
- High load capacity
- Fixing close to free edges
- Rapid curing

Application Procedures:
1. Using a rotary percussive drill, drill holes with the specified diameter and depth. After drilling, clean hole with appropriate sized INDU-Wire Brush and INDU-Air Pump.
2. Remove screw cap from cartridge and attach mixer nozzle. Place in INDU-Applicator Gun and begin to dispense material to waste until an even colour is achieved.
3. Remove any free water from the drilled hole.
4. Insert mixer nozzle to the back of the hole and fill hole half-way (depends on application). Withdraw nozzle as you fill the hole, for deep holes use extension tubing.
5. Insert fixing immediately, slowly with a slight twisting motion. Remove excess resin from hole opening before it sets.
6. Fixing should be left undisturbed until the loading time has elapsed. Only then should the fixture be attached.

Packaging:
INDUCRET-VK4065 is available in the following packaging:
- 410ml Self contained cartridge system. A and B components are filled into the cartridge at the pre-determined mixing ratio of 1:10.

Recommended Accessories:
- INDU-Wire Brush: used for cleaning the holes prior to injection of INDUCRET4065
- INDU-Air Pump: used for cleaning the holes prior to injection of INDUCRET4065
- INDU-Applicator Gun: used for dispensing INDUCRET4065 from the cartridge

Consumption Rates:
See table.

Typical Properties:
Open and Curing Times:

Cartridge temperature	Open time	Substrate temperature	Curing time
Minimum cartridge temperature +5° C		-5 to 0° C	24 hrs
		0 to 5° C	180 mins
5 to 10° C	8 mins	5 to 10° C	100 mins
10 to 20° C	4 mins	10 to 20° C	70 mins
20 to 35° C	1 min	20 to 35° C	40 mins

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Installation and load capacity data for threaded anchors and consumption rates

Anchor dia d (mm)	Hole dia d_o (mm)	Hole depth $h_o=h_{ef}$ (mm)	Brush size	Characteristic distances		Min concrete thickness h_{min} (mm)	Material consumption (ml)	Max installation torque (ml)	Resistance to tensile loads in C20/25 concrete (kN) to ETAG 001	
				Edge $C_{cr,N}$	spacing $S_{cr,N}$				Characteristic load N_{Rk}	Design resistance N_{Rd}
8	10	64	S14	64	128	100	2.8	10	16	7.4
-	-	80	-	80	160	110	3.4	-	20.5	9.5
-	-	96	-	96	192	125	4.1	-	25	11.6
10	12	80	S14	80	160	110	4.5	20	25	11.6
-	-	90	-	90	180	120	5.0	-	29	13.4
-	-	120	-	120	240	150	6.7	-	40	18.5
12	14	96	M20	96	192	125	6.9	40	40	18.5
-	-	110	-	110	220	140	7.8	-	46	21.3
-	-	144	-	144	288	175	10.3	-	60	27.8
16	18	128	M20	128	256	160	12.2	80	60	27.8
-	-	192	-	192	384	225	18.8	-	95	44.0
20	22	160	L29	160	320	200	21.7	150	75	34.7
-	-	170	-	170	340	220	23.0	-	80	37.0
-	-	240	-	240	480	280	32.5	-	115	53.2
24	26	192	L29	192	384	240	34.2	200	115	53.2
-	-	210	-	210	420	270	37.4	-	125	57.9
-	-	288	-	288	576	335	51.3	-	170	78.7

The quoted values for N_{Rk} are for C20/25 concrete; factors apply for higher strength concretes:

- C30/37 = 1.04
- C40/50 = 1.07
- C50/60 = 1.09

Close edge (C) and anchor spacing (S) distances:

- The characteristic edge distance ($C_{cr,N}$) is 1.0 x h_{ef}
- The characteristic spacing distance ($S_{cr,N}$) is 2.0 x h_{ef}
- The minimum edge (C_{min}) and spacing (S_{min}) distances are 0.5 x h_{ef}

All load capacity values assume adequate steel strength; the anchor tests were carried out using 10.9 or 12.9 steel.

d: anchor nominal diameter (mm)
d_o: drilled hole diameter (mm)
h_o: hole depth (=h_{ef}) (mm)
h_{ef}: effective bond length (mm)
C: close edge distance (mm)
S: anchor spacing (mm)
$C_{cr,N}$: minimum close edge distance to achieve N_{Rk}
$S_{cr,N}$: minimum anchor spacing to achieve N_{Rk}
N_{Rk}: characteristic tensile load (kN)
N_{Rd}: design resistance (kN)

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Concrete capacity reduction factors, tension (ψ_N)

Single anchor, close edge C
$\psi_{c,N} = 0.5\ (C/h_{ef}) + 0.5 < 1$

Two anchors, close spacing S
$\psi_{s,N} = 0.25\ (S/h_{ef}) + 0.5 < 1$

Two anchors, c/l perpendicular to close edge C1
$\psi_{sc,N} = 0.25\ (S/h_{ef}) + 0.25\ (C1/h_{ef}) + 0.25 < 1$

Two anchors, c/l parallel to close edge C2
$\psi_{cs,N} = 0.25\ (C2/h_{ef}) + 0.125\ (S/h_{ef}) + 0.125\ (C2/h_{ef})\ (S/h_{ef}) + 0.25 < 1$

Concrete capacity reduction for more complex anchor configurations in tension, and for shear forces acting towards a close edge, should be determined using the design method A, given in ETAG 001, Annex C.

Storage & Shelf Life:
12 months when stored in original packaging in cool climate (+5° C - +20° C) out of direct sunlight.

Health & Safety:
INDUCRET-VK4065 Cartridge System is not currently classified as a hazardous material. Wear suitable gloves and eye/face protection. For further health and safety information, please refer to the valid Material Safety Data Sheet.