

# rbs P400c Cartridge

Two Component Styrenated Polyester Resin

## DESCRIPTION

rbs P400C is a styrenated polyester resin 400ml coaxial cartridge system with a resin to hardener ratio of 10 parts to 1. The cartridge has a coaxial nozzle outlet and is sealed with the screw cap.

## USES

- Anchor sockets.
- Fixing externally threaded rods.
- Concrete reinforcing bars.
- Securing profiled sections and bars.

## FEATURES

- Versatile.
- Anchoring without expansion pressure.
- Fixing close to free edges.
- Medium / high load capacities.
- Cost effective.

## APPLICATION

- Drill hole to correct diameter depth.
- Brush the hole and blow out the drilling dust.
- Unscrew the cap.
- Attach the mixer nozzle.
- Insert the cartridge into the applicator gun.
- Extrude a small amount of resin to ensure an even mix of components from the cartridge.
- Insert the nozzle and inject sufficient resin into the hole.
- Insert the fixing with a slightly rotating motion to ensure full contact.
- Leave undisturbed until the resin loading time has elapsed.
- Attach the fixture, if any, and tighten nut.
- Note: perforated sleeves should be used in materials which may contain voids e.g. hollow blocks, perforated brick, cavity walls, old masonry etc.

## HEALTH & SAFETY

The C-CN/400-10/p Cartridge System contains styrene which is currently classified as a hazardous material, and it is flammable with a flash point of 32°C.

Wear suitable protective clothing eye/face protection and gloves and ensure adequate ventilation.

For further health and safety information, please refer to the relevant Safety Data Sheet.

## PACKAGING

rbs P400c Cartridge is supplied in a 400ml tube.

## STORAGE

Cartridges should be stored in their original packaging in cool conditions (20°C - 0°C) out of direct sunlight. When stored in this way the shelf life will be 12 months from the date of manufacture.

## TECHNICAL DATA

Gel and loading times:

App Temp	T Gel Range	T Gel Typical	T Load
30	3-5	3	20
25	4-7	4	30
20	5-10	6	40
10	10-20	12	80
5	15-30	18	120

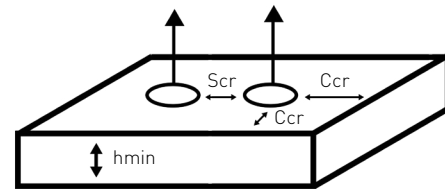
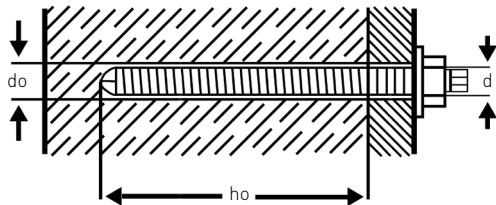
## IMPORTANT NOTE

Whilst all reasonable care is taken in compiling technical data on the Company's products, all recommendations or suggestions regarding the use of such products are made without guarantee, since the conditions of use are beyond the control of the Company.

It is the responsibility of the customer to satisfy himself that each product is fit for the purpose for which he intends to use it, that the actual conditions of use are suitable, and that in the light of our continual research and development programme the information relating to each product has not been superseded.

## LOAD CAPACITY DATA FOR ALL THREAD STUDS

Stud diameter d (mm)	Hole diameter do (mm)	Hole depth ho (mm)	Required close edge distance to achieve Nrec Ccr (mm)	Required anchor spacing to achieve Nrec Scr (mm)	Min concrete member thickness hmin (mm)	Characteristic load in min 30N/mm <sup>2</sup> concrete NRK (kN)	Recommended load in min 30N/ mm <sup>2</sup> concrete Nred (kN)
8	10	80	120	80	110	12.5	4.2
10	12	90	135	90	120	23.1	7.7
12	14	110	165	110	140	23.9	8
16	18	125	190	125	165	36.9	12.3
20	22	170	255	170	220	53.5	17.8
24	26	210	315	210	270	66	22



- d stud or bar nominal diameter (mm)
- do drilled hole diameter (mm)
- ho hole depth (allthread) (mm)
- hef effective bond length (rebar) (mm)
- C close edge distance (mm)
- S anchor spacing (mm)
- Ccr required close edge distance to achieve NRK
- Scr required anchor spacing to achieve NRK
- hmin minimum concrete member thickness (mm)
- fc<sub>m</sub> concrete compressive strength (N/mm<sup>2</sup>)

- NRK anchor characteristic load, tension (kN)
- VRK anchor characteristic load, shear (kN)
- Nrec anchor recommended load (kN)
- Rfc<sub>N</sub> close edge reduction factor, tension only
- Rfc<sub>V</sub> close edge reduction factor, shear only
- Rfs close spacing reduction factor, tension and shear

## LOAD CAPACITY DATA FOR REINFORCING BAR ANCHORS

Equations for tensile and shear load capacities

Tension  $NRK = (hef - 50) / 2.5$

Shear  $VRK = (0.5 (hef - do - fc_m) / 1000 (fc_m \leq 50)$

Concrete capacity reduction factors

Close edge, tension:  $Rfc_N = 0.4 + (0.4 C / hef)$

Close edge, shear  $Rfc_V = 0.25 + (0.5 C / hef)$

Close spacing, tension or shear  $Rfs = 0.4 + (0.6 S / hef)$

Recommended hole diameters (do)

Bar dia. d	6	8	10	12	16	20	25	32
Hole dia. do	8	10	12	14	20	25	32	38

$0.5 \leq (C / hef) \leq 1.5$

$0.5 \leq (C / hef) \leq 1.5$

$0.25 \leq (S / hef) \leq 1$