

# BCR 400 V-PLUS (Previously known as CIKOdowel V Plus)

## High Performance Polyester Cartridge for Anchoring

### Description

BCR400 V-PLUS is two components anchoring adhesive based on styrene free Vinylester suitable for both horizontal and vertical anchoring in concrete, solid masonry, etc.

It is specially formulated to provide a permanent installation of reinforcement bars and rods into substrate.

### Properties

- Non sagging even for overhead application
- Rapid strength development
- High load capacity
- Low VOC
- Good chemical resistance
- Easy to use
- Exceptional adhesion and bond strength
- Exceptional high compressive, flexural and tensile strengths.
- Good chemical resistance

### Application area

BCR400 V-PLUS can be used as a fast curing anchoring adhesive providing a permanent fix for all the grades of:

- Reinforcement bars
- Starter bars
- Dowel bars
- Threaded rods
- Grounds anchors
- Hand rails
- Safety fence
- Wall ties
- Railways tracks
- Hollow and solid masonry

### Setting Time

|                    |    |    |       |     |    |    |    |    |
|--------------------|----|----|-------|-----|----|----|----|----|
| T (°C)             | 5  | 10 | 15    | 20  | 25 | 30 | 35 | 40 |
| Time (min)         | 25 | 16 | 11-12 | 7-8 | 5  | 3  | 2  | 1  |
| Loading Time (min) | 90 | 60 | 45    | 40  | 35 | 30 | 25 | 20 |

### Physical properties

|                                |                                     |
|--------------------------------|-------------------------------------|
| Colour of the mix              | Grey                                |
| Mix density                    | 1.5 ± 0.05 kg/l                     |
| Compressive Strength ASTM C579 | >40 Mpa @ 1 day<br>>75 Mpa @ 7 days |
| Flexural Strength ASTM C348    | >20 Mpa @ 7 days                    |

### Load Data with Maximum effective anchorage depth (@ 25 degree C)

| Condition 1           |      |       |
|-----------------------|------|-------|
| Steel Quality         | B500 |       |
| Rebar Diameter        | 12   | 25    |
| Anchoring Depth       | 240  | 500   |
| Ultimate Tension Load | 61.1 | 265.1 |
| Ultimate Shear Load   | 36.6 | 159.0 |

| Condition 2           |       |       |
|-----------------------|-------|-------|
| Steel Quality         | 8.8   |       |
| Threaded Rod          | 12    | 24    |
| Anchoring Depth       | 240   | 480   |
| Ultimate Tension Load | 67.4  | 40.4  |
| Ultimate Shear Load   | 293.0 | 175.8 |

\*Additional information for other condition are available upon request

## Coverage / Fixing

| Threaded Stud | Hole $d_0(\text{mm}) \times h_1(\text{mm})$ | Number of fixing |
|---------------|---|------------------|
| M8            | 10 x 90                                     | ±72              |
| M10           | 12 x 95                                     | ±52              |
| M12           | 14 x 115                                    | ±34              |
| M16           | 18 x 130                                    | ±21              |
| M20           | 24 x 175                                    | ±7               |
| M24           | 28 x 215                                    | ±5               |
| M27           | 30 x 245                                    | ±4               |
| M30           | 35 x 275                                    | ±2               |

**WARNING:** The number of fixings above mentioned has been calculated according to the theoretical volume needed to fill the hole (or sleeve) excluded the volume of the inserted metal rod. In the theoretical volume it is included a standard extra quantity but the real quantity of the product may be different than it in function of the real application of the product.

## Application instructions

1. Drill the hole using an electrical drill perpendicularly into the concrete in accordance to anchor size.
2. Blow the hole with an appropriate pump blower or compressed air (oil-free compressors shall be used) clean the lateral surface of the hole with an appropriate steel brush, and blow again in the hole until there is no dust and/or any residual material inside. We strongly recommend to use the steel brush to clean the hole sides.
3. Unscrew the front cup, screw on the mixer and insert the cartridge in the gun. Use protections for hands and face.
4. Before starting to use the cartridge, eject a first part of the product, being sure that: 1) Through the mixer (transparent) see that the flux of product is composed of the part A (white colour) and of part B (black colour). 2) The two components are completely mixed. The complete mixing is reached only after that the product, obtained by mixing the two component, comes out from the mixer with a uniform colour. Now the cartridge is ready to be used.
5. Inject resin into the hole up to fill it 2/3rds. 2) Before insert the rod, verify that the element is dry and free from oil and other contaminants. Insert threaded stud turning back and forth to avoid presence of air in the fitted hole. 3) For the installation and the following anchor load phase, respect the open time and curing time detailed in the technical data sheet 4) Before to load the anchor, check the hardened of the product. 5) The cartridge can be used again screwing the cup and replacing the mixer.

## Packaging

BCR400 V-PLUS is available in 400ml side by side cartridge. Other cartridge sizes are available upon request.

## Shelf life

BCR400 V-PLUS has a shelf life of 2 years if stored in accordance with manufacturer instructions.

## Storage

BCR400 V-PLUS should be stored under cool enclosed shaded area at temperatures between 5 – 30°C.

## Health & safety

BCR400 V-PLUS should not come in contact with eyes or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Applicator should wear appropriate clothes, gloves and goggles. Use of barrier cream is recommended to provide additional skin protection. If comes in contact with eyes, flush with plenty of fresh water and seek medical advice.

Refer Material Safety Data Sheet for further details.

## Technical Support

*For any technical support, do not hesitate to contact CIKO team at any time as CIKO offers on and off site services to end users, specifier and contractors.*

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