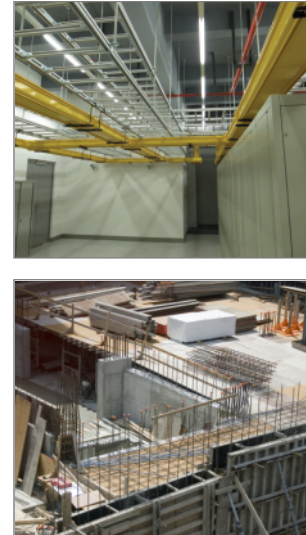


R-KER with Post-Installed Rebars

High performance vinylester resin approved for use with post-installed rebar connections



Approvals and Reports

- ETA-12/0319



Product information

Features and benefits

- Approved for use with post-installed rebars in non-cracked concrete (ETAG001 Option 7)
- Suitable for use in low temperatures (down to -20°C for winter option) enables use throughout the year
- Winter version can be used in warmer temperatures for faster curing
- Suitable for use in dry and wet substrates as well as holes and substrates covered with water
- Rapid bonding time enables quick execution of works
- Very high load capacity
- Anchor does not generate tensions in the substrate which enables R-KER to be specified where closer edge and spacing distances are required
- Suitable for multiple use. Partly used product can be reused after fitting new nozzle

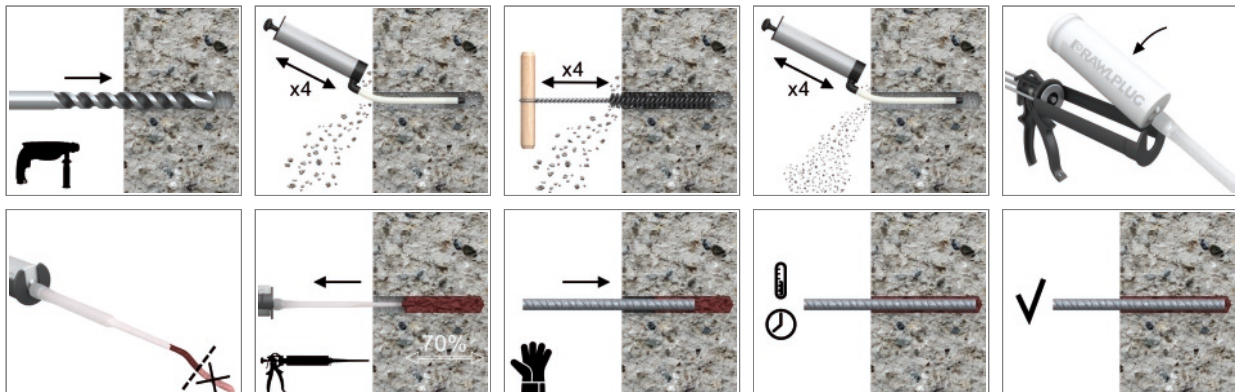
Applications

- Canopies
- Barriers
- Formwork installation
- Formwork support systems
- Securing formwork
- Safety barriers
- Reinforcement bars
- Road Signs
- Rebar
- Platforms

Base materials

- Approved for use in:
- Non-cracked concrete C20/25-C50/60

Installation guide

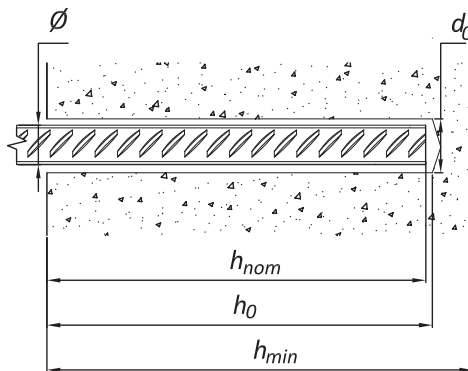


Product information

1. Drill hole to the required diameter and depth for rebar size being used.
2. Clean the hole with brush and hand pump at least four times each. It is very important and necessary before installation.
3. Insert cartridge into gun and attach nozzle.
4. Dispense to waste until even colour is obtained.
5. Insert the mixing nozzle to the far end of the hole and inject resin, slowly withdrawing the nozzle as the hole is filled to 2/3 of its depth.
6. Immediately insert the rebar, slowly and with slight twisting motion. Remove any excess resin around the hole before it sets and leave it undisturbed until the curing time elapses. Attach fixture and tighten the nut to the required torque.

| Product Code | Resin | Description / Resin Type | Volume |
|--------------|---------|---|--------|
| | | | [ml] |
| R-KER-280 | R-KER | Styrene Free Vinylester Resin | 280 |
| R-KER-300 | | | 300 |
| R-KER-310 | | | 310 |
| R-KER-345 | | | 345 |
| R-KER-380 | | | 380 |
| R-KER-400 | | | 400 |
| R-KER-300-W | R-KER-W | Low Temperature (Winter) / Rapid Cure Styrene Free Vinylester Resin | 300 |
| R-KER-380-W | | | 380 |
| R-KER-400-S | R-KER-S | High Temperature (Summer) / Slow Cure Styrene Free Vinylester Resin | 400 |
| R-KER-380-S | | | 380 |
| R-KER-400-W | R-KER-W | Low Temperature (Winter) / Rapid Cure Styrene Free Vinylester Resin | 400 |

Installation data



POST INSTALLED REBARS

| Size | | | Ø8 | Ø10 | Ø12 | Ø14 | Ø16 | Ø20 | Ø25 | Ø28 | Ø32 |
|----------------------------------|---------------|------|-----|-----|-----|-----|-----|------|------|------|------|
| Rebar diameter | d_s | [mm] | 8 | 10 | 12 | 14 | 16 | 20 | 25 | 28 | 32 |
| Hole diameter in substrate | d_0 | [mm] | 12 | 14 | 16 | 18 | 20 | 25 | 30 | 35 | 40 |
| Brush diameter | - | [mm] | 14 | 16 | 18 | 20 | 22 | 27 | 32 | 37 | 42 |
| Min. anchorage length | $l_{b, min.}$ | [mm] | 115 | 145 | 170 | 200 | 230 | 285 | 355 | 400 | 455 |
| Min. lap length (overlap splice) | $l_{0, min.}$ | [mm] | 200 | 200 | 200 | 210 | 240 | 300 | 375 | 420 | 480 |
| Max. anchorage length | $l_{v, max.}$ | [mm] | 400 | 500 | 600 | 700 | 800 | 1000 | 1000 | 1000 | 1000 |

Installation data

Minimum working and curing time

R-KER

| Resin temperature | Concrete temperature | Curing time* | Working time |
|-------------------|----------------------|--------------|--------------|
| [°C] | [°C] | [min] | [min] |
| 5 | -20 | - | - |
| 5 | -15 | - | - |
| 5 | -10 | - | - |
| 5 | -5 | 6 h | 60 |
| 5 | 0 | 3 h | 40 |
| 5 | 5 | 2 h | 20 |
| 10 | 10 | 80 | 12 |
| 15 | 15 | 60 | 8 |
| 20 | 20 | 45 | 5 |
| 25 | 25 | 30 | 3 |
| 25 | 30 | 20 | 2 |
| 25 | 40 | 10 | 0.5 |
| 25 | 45 | - | - |
| 25 | 50 | - | - |

R-KER-W

| Resin temperature | Concrete temperature | Curing time* | Working time |
|-------------------|----------------------|--------------|--------------|
| [°C] | [°C] | [min] | [min] |
| 5 | -20 | 24 h | 100 |
| 5 | -15 | 16 h | 60 |
| 5 | -10 | 8 h | 30 |
| 5 | -5 | 4 h | 16 |
| 5 | 0 | 2 h | 12 |
| 5 | 5 | 1 h | 8 |
| 10 | 10 | 45 | 5 |
| 15 | 15 | 30 | 3 |
| 20 | 20 | 10 | 2 |
| 25 | 25 | - | - |
| 25 | 30 | - | - |
| 25 | 40 | - | - |
| 25 | 45 | - | - |
| 25 | 50 | - | - |

R-KER-S

| Resin temperature | Concrete temperature | Curing time* | Working time |
|-------------------|----------------------|--------------|--------------|
| [°C] | [°C] | [min] | [min] |
| 5 | -20 | - | - |
| 5 | -15 | - | - |
| 5 | -10 | - | - |
| 5 | -5 | 24 h | 65 |
| 5 | 0 | 16 h | 50 |
| 5 | 5 | 12 h | 35 |
| 10 | 10 | 8 h | 20 |
| 15 | 15 | 6 h | 12 |
| 20 | 20 | 4 h | 9 |
| 25 | 25 | 3 h | 7 |
| 25 | 30 | 2 h | 6 |
| 25 | 40 | 45 | 4 |
| 25 | 45 | 35 | 3 |
| 25 | 50 | 25 | 2 |

Mechanical properties

POST INSTALLED REBARS

| Size | | | Ø8 | Ø10 | Ø12 | Ø14 | Ø16 | Ø20 | Ø25 | Ø28 | Ø32 |
|---|--------------|----------------------|------|------|-------|-------|-------|-------|-------|--------|-------|
| 18G2 | | | | | | | | | | | |
| Nominal ultimate tensile strength - tension | f_{uk} | [N/mm ²] | 480 | 480 | 480 | 480 | 480 | 480 | 480 | 480 | 480 |
| Nominal yield strength - tension | f_{yk} | [N/mm ²] | 355 | 355 | 355 | 355 | 355 | 355 | 355 | 355 | 355 |
| Cross sectional area - tension | A_s | [mm ²] | 50.3 | 78.5 | 113.1 | 153.9 | 201.1 | 314.2 | 490.9 | 615.8 | 804.2 |
| Elastic section modulus | W_{el} | [mm ³] | 50.3 | 98.2 | 169.6 | 269.4 | 402.1 | 785.4 | 1534 | 2155.1 | 3217 |
| Characteristic bending resistance | $M^0_{Rk,s}$ | [Nm] | 29 | 57 | 98 | 155 | 232 | 452 | 884 | 1241 | 1853 |
| Design bending resistance | M | [Nm] | 17 | 32 | 56 | 89 | 132 | 259 | 505 | 709 | 1059 |
| 34GS | | | | | | | | | | | |
| Nominal ultimate tensile strength - tension | f_{uk} | [N/mm ²] | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| Nominal yield strength - tension | f_{yk} | [N/mm ²] | 410 | 410 | 410 | 410 | 410 | 410 | 410 | 410 | 410 |
| Cross sectional area - tension | A_s | [mm ²] | 50.3 | 78.5 | 113.1 | 153.9 | 201.1 | 314.2 | 490.9 | 615.8 | 804.2 |
| Elastic section modulus | W_{el} | [mm ³] | 50.3 | 98.2 | 169.6 | 269.4 | 402.1 | 785.4 | 1534 | 2155.1 | 3217 |
| Characteristic bending resistance | $M^0_{Rk,s}$ | [Nm] | 30 | 59 | 102 | 162 | 241 | 471 | 920 | 1293 | 1930 |
| Design bending resistance | M | [Nm] | 17 | 34 | 58 | 92 | 138 | 269 | 526 | 739 | 1103 |
| B500SP | | | | | | | | | | | |
| Nominal ultimate tensile strength - tension | f_{uk} | [N/mm ²] | 575 | 575 | 575 | 575 | 575 | 575 | 575 | 575 | 575 |
| Nominal yield strength - tension | f_{yk} | [N/mm ²] | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| Cross sectional area - tension | A_s | [mm ²] | 50.3 | 78.5 | 113.1 | 153.9 | 201.1 | 314.2 | 490.9 | 615.8 | 804.2 |
| Elastic section modulus | W_{el} | [mm ³] | 50.3 | 98.2 | 169.6 | 269.4 | 402.1 | 785.4 | 1534 | 2155.1 | 3217 |
| Characteristic bending resistance | $M^0_{Rk,s}$ | [Nm] | 35 | 68 | 117 | 186 | 277 | 542 | 1059 | 1487 | 2220 |
| Design bending resistance | M | [Nm] | 20 | 39 | 67 | 106 | 159 | 310 | 605 | 850 | 1268 |
| RB500/BSt500S | | | | | | | | | | | |
| Nominal ultimate tensile strength - tension | f_{uk} | [N/mm ²] | 550 | 550 | 550 | 550 | 550 | 550 | 550 | 550 | 550 |
| Nominal yield strength - tension | f_{yk} | [N/mm ²] | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| Cross sectional area - tension | A_s | [mm ²] | 50.3 | 78.5 | 113.1 | 153.9 | 201.1 | 314.2 | 490.9 | 615.8 | 804.2 |
| Elastic section modulus | W_{el} | [mm ³] | 50.3 | 98.2 | 169.6 | 269.4 | 402.1 | 785.4 | 1534 | 2155.1 | 3217 |
| Characteristic bending resistance | $M^0_{Rk,s}$ | [Nm] | 33 | 65 | 112 | 178 | 265 | 518 | 1012 | 1422 | 2123 |
| Design bending resistance | M | [Nm] | 19 | 37 | 64 | 102 | 152 | 296 | 579 | 813 | 1213 |

Basic performance data

| ANCHORAGES – DESIGN RESISTANCE – CONCRETE C20/25, STEEL A-II (18G2) [kN] | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|-------|--------|
| $\frac{l_{bd}}{d_s}$ [mm] | 100 | 110 | 130 | 150 | 170 | 190 | 210 | 230 | 260 | 280 | 290 | 330 | 360 | 400 | 460 | 530 | 670 | 750 | 800 | 830 | 850 | 900 | 930 | 1000 | Steel Failure | | |
| 8 | 5,8 | 6,4 | 7,5 | 8,7 | 9,8 | 11,0 | 12,1 | 13,3 | 15,0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 15,51 | |
| 10 | - | 7,9 | 9,4 | 10,8 | 12,3 | 13,7 | 15,2 | 16,6 | 18,8 | 20,2 | 20,9 | 23,8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 24,23 |
| 12 | - | - | 11,3 | 13,0 | 14,7 | 16,5 | 18,2 | 19,9 | 22,5 | 24,3 | 25,1 | 28,6 | 31,2 | 34,7 | - | - | - | - | - | - | - | - | - | - | - | - | 34,89 |
| 14 | - | - | - | 15,2 | 17,2 | 19,2 | 21,2 | 23,3 | 26,3 | 28,3 | 29,3 | 33,4 | 36,4 | 40,4 | 46,5 | - | - | - | - | - | - | - | - | - | - | - | 47,50 |
| 16 | - | - | - | - | 19,6 | 22,0 | 24,3 | 26,6 | 30,0 | 32,4 | 33,5 | 38,1 | 41,6 | 46,2 | 53,2 | 61,2 | - | - | - | - | - | - | - | - | - | - | 62,04 |
| 20 | - | - | - | - | - | - | 30,3 | 33,2 | 37,6 | 40,4 | 41,9 | 47,7 | 52,0 | 57,8 | 66,4 | 76,6 | 96,8 | - | - | - | - | - | - | - | - | - | 96,93 |
| 25 | - | - | - | - | - | - | - | - | 46,9 | 50,6 | 52,4 | 59,6 | 65,0 | 72,2 | 83,1 | 95,7 | 121,0 | 135,4 | 144,4 | 149,9 | - | - | - | - | - | - | 151,45 |
| 28 | - | - | - | - | - | - | - | - | - | - | 58,6 | 66,7 | 72,8 | 80,9 | 93,0 | 107,2 | 135,5 | 151,7 | 161,8 | 167,8 | 171,9 | 182,0 | 188,1 | - | - | - | 189,98 |
| 32 | - | - | - | - | - | - | - | - | - | - | - | 76,3 | 83,2 | 92,4 | 106,3 | 122,5 | 154,8 | 173,3 | 184,9 | 191,8 | 196,4 | 208,0 | 214,9 | 231,1 | - | - | 248,14 |

Basic performance data

| ANCHORAGES – DESIGN RESISTANCE – CONCRETE C50/60, STEEL A-II (18G2) [kN] | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|------|---------------|
| l_{bd} [mm] d_s [mm] | 100 | 120 | 140 | 160 | 170 | 180 | 200 | 230 | 250 | 280 | 290 | 320 | 330 | 400 | 450 | 500 | 550 | 640 | 700 | 720 | 850 | 910 | 950 | 1000 | Steel failure |
| 8 | 9,3 | 11,2 | 13,0 | 14,9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 15,51 |
| 10 | 11,6 | 13,9 | 16,3 | 18,6 | 19,8 | 20,9 | 23,2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 24,23 |
| 12 | - | 16,7 | 19,5 | 22,3 | 23,7 | 25,1 | 27,9 | 32,1 | 34,9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 34,89 |
| 14 | - | - | 22,8 | 26,0 | 27,7 | 29,3 | 32,5 | 37,4 | 40,7 | 45,5 | 47,2 | - | - | - | - | - | - | - | - | - | - | - | - | - | 47,50 |
| 16 | - | - | - | 29,7 | 31,6 | 33,5 | 37,2 | 42,8 | 46,5 | 52,0 | 53,9 | 59,5 | 61,3 | - | - | - | - | - | - | - | - | - | - | - | 62,04 |
| 20 | - | - | - | - | - | - | 42,7 | 49,1 | 53,4 | 59,8 | 61,9 | 68,3 | 70,5 | 85,4 | 96,1 | - | - | - | - | - | - | - | - | - | 96,93 |
| 25 | - | - | - | - | - | - | - | - | 58,9 | 65,9 | 68,3 | 75,4 | 77,7 | 94,2 | 106,0 | 117,8 | 129,5 | 150,7 | - | - | - | - | - | - | 151,45 |
| 28 | - | - | - | - | - | - | - | - | - | 73,9 | 76,5 | 84,4 | 87,0 | 105,5 | 118,7 | 131,9 | 145,1 | 168,8 | 184,6 | 189,9 | - | - | - | - | 189,98 |
| 32 | - | - | - | - | - | - | - | - | - | - | - | 86,8 | 89,5 | 108,5 | 122,1 | 135,6 | 149,2 | 173,6 | 189,9 | 195,3 | 230,6 | 246,9 | - | - | 248,14 |

| OVERLAP SPLICE – DESIGN RESISTANCE* – CONCRETE C20/25, STEEL A-II (18G2) [kN] | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| l_b [mm] d_s [mm] | 200 | 210 | 240 | 250 | 260 | 300 | 330 | 375 | 400 | 420 | 440 | 460 | 480 | 500 | 530 | 550 | 600 | 670 | 750 | 800 | 830 | 900 | 930 | 1000 | Steel failure |
| 8 | 11,6 | 12,1 | 13,9 | 14,4 | 15,0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 15,51 |
| 10 | 14,4 | 15,2 | 17,3 | 18,1 | 18,8 | 21,7 | 23,8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 24,23 |
| 12 | 17,3 | 18,2 | 20,8 | 21,7 | 22,5 | 26,0 | 28,6 | 32,5 | 34,7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 34,89 |
| 14 | - | 21,2 | 24,3 | 25,3 | 26,3 | 30,3 | 33,4 | 37,9 | 40,4 | 42,5 | 44,5 | 46,5 | - | - | - | - | - | - | - | - | - | - | - | - | 47,50 |
| 16 | - | - | 27,7 | 28,9 | 30,0 | 34,7 | 38,1 | 43,3 | 46,2 | 48,5 | 50,8 | 53,2 | 55,5 | 57,8 | 61,2 | - | - | - | - | - | - | - | - | - | 62,04 |
| 20 | - | - | - | - | - | 43,3 | 47,7 | 54,2 | 57,8 | 60,7 | 63,6 | 66,4 | 69,3 | 72,2 | 76,6 | 79,4 | 86,7 | 96,8 | - | - | - | - | - | - | 96,93 |
| 25 | - | - | - | - | - | - | - | 67,7 | 72,2 | 75,8 | 79,4 | 83,1 | 86,7 | 90,3 | 95,7 | 99,3 | 108,3 | 121,0 | 135,4 | 144,4 | 149,9 | - | - | - | 151,45 |
| 28 | - | - | - | - | - | - | - | - | - | 84,9 | 89,0 | 93,0 | 97,1 | 101,1 | 107,2 | 111,2 | 121,3 | 135,5 | 151,7 | 161,8 | 167,8 | 182,0 | 188,1 | - | 189,98 |
| 32 | - | - | - | - | - | - | - | - | - | - | - | - | 110,9 | 115,6 | 122,5 | 127,1 | 138,7 | 154,8 | 173,3 | 184,9 | 191,8 | 208,0 | 214,9 | 231,1 | 248,14 |

| OVERLAP SPLICE – DESIGN RESISTANCE* – CONCRETE C50/60, STEEL A-II (18G2) [kN] | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|---------------|
| l_b [mm] d_s [mm] | 200 | 208 | 210 | 240 | 250 | 290 | 300 | 330 | 375 | 400 | 420 | 450 | 480 | 500 | 550 | 600 | 640 | 700 | 720 | 800 | 850 | 900 | 910 | 1000 | Steel failure |
| 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 15,51 |
| 10 | 23,2 | 24,2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 24,23 |
| 12 | 27,9 | 29,0 | 29,3 | 33,5 | 34,9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 34,89 |
| 14 | - | - | 34,2 | 39,0 | 40,7 | 47,2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 47,50 |
| 16 | - | - | - | 44,6 | 46,5 | 53,9 | 55,8 | 61,3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 62,04 |
| 20 | - | - | - | - | - | - | 64,1 | 70,5 | 80,1 | 85,4 | 89,7 | 96,1 | - | - | - | - | - | - | - | - | - | - | - | - | 96,93 |
| 25 | - | - | - | - | - | - | - | - | 88,3 | 94,2 | 98,9 | 106,0 | 113,0 | 117,8 | 129,5 | 141,3 | 150,7 | - | - | - | - | - | - | - | 151,45 |
| 28 | - | - | - | - | - | - | - | - | - | 110,8 | 118,7 | 126,6 | 131,9 | 145,1 | 158,3 | 168,8 | 184,6 | 189,9 | - | - | - | - | - | - | 189,98 |
| 32 | - | - | - | - | - | - | - | - | - | - | - | - | 130,2 | 135,6 | 149,2 | 162,8 | 173,6 | 189,9 | 195,3 | 217,0 | 230,6 | 244,2 | 246,9 | - | 248,14 |

| ANCHORAGES – DESIGN RESISTANCE – CONCRETE C20/25, STEEL A-III (34GS) [kN] | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|--------|
| l_{bd} [mm] d_s [mm] | 100 | 120 | 140 | 170 | 190 | 210 | 240 | 300 | 310 | 320 | 330 | 380 | 400 | 440 | 460 | 500 | 540 | 620 | 700 | 770 | 850 | 900 | 960 | 1000 | Steel failure | |
| 8 | 5,8 | 6,9 | 8,1 | 9,8 | 11,0 | 12,1 | 13,9 | 17,3 | 17,9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 17,91 | |
| 10 | - | 8,7 | 10,1 | 12,3 | 13,7 | 15,2 | 17,3 | 21,7 | 22,4 | 23,1 | 23,8 | 27,4 | - | - | - | - | - | - | - | - | - | - | - | - | 27,99 | |
| 12 | - | - | 12,1 | 14,7 | 16,5 | 18,2 | 20,8 | 26,0 | 26,9 | 27,7 | 28,6 | 32,9 | 34,7 | 38,1 | 39,9 | - | - | - | - | - | - | - | - | - | 40,30 | |
| 14 | - | - | - | 17,2 | 19,2 | 21,2 | 24,3 | 30,3 | 31,3 | 32,4 | 33,4 | 38,4 | 40,4 | 44,5 | 46,5 | 50,6 | 54,6 | - | - | - | - | - | - | - | 54,85 | |
| 16 | - | - | - | - | 22,0 | 24,3 | 27,7 | 34,7 | 35,8 | 37,0 | 38,1 | 43,9 | 46,2 | 50,8 | 53,2 | 57,8 | 62,4 | 71,6 | - | - | - | - | - | - | 71,65 | |
| 20 | - | - | - | - | - | - | 34,7 | 43,3 | 44,8 | 46,2 | 47,7 | 54,9 | 57,8 | 63,6 | 66,4 | 72,2 | 78,0 | 89,6 | 101,1 | 111,2 | - | - | - | - | 111,95 | |
| 25 | - | - | - | - | - | - | - | 54,2 | 56,0 | 57,8 | 59,6 | 68,6 | 72,2 | 79,4 | 83,1 | 90,3 | 97,5 | 111,9 | 126,4 | 139,0 | 153,5 | 162,5 | 173,3 | - | 174,92 | |
| 28 | - | - | - | - | - | - | - | - | - | - | - | 66,7 | 76,8 | 80,9 | 89,0 | 93,0 | 101,1 | 109,2 | 125,4 | 141,6 | 155,7 | 171,9 | 182,0 | 194,1 | 202,2 | 219,42 |
| 32 | - | - | - | - | - | - | - | - | - | - | - | - | 87,8 | 92,4 | 101,7 | 106,3 | 115,6 | 124,8 | 143,3 | 161,8 | 178,0 | 196,4 | 208,0 | 221,9 | 231,1 | 286,59 |

Basic performance data

| ANCHORAGES – DESIGN RESISTANCE – CONCRETE C50/60, STEEL A-III (34GS) [kN] | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| l_{bd} [mm] d_s [mm] | 100 | 120 | 140 | 160 | 190 | 200 | 240 | 250 | 280 | 290 | 300 | 320 | 330 | 380 | 450 | 520 | 550 | 600 | 700 | 740 | 830 | 900 | 950 | 1000 | Steel failure |
| 8 | 9,3 | 11,2 | 13,0 | 14,9 | 17,7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 17,91 |
| 10 | 11,6 | 13,9 | 16,3 | 18,6 | 22,1 | 23,2 | 27,9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 27,99 |
| 12 | - | 16,7 | 19,5 | 22,3 | 26,5 | 27,9 | 33,5 | 34,9 | 39,0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 40,30 |
| 14 | - | - | 22,8 | 26,0 | 30,9 | 32,5 | 39,0 | 40,7 | 45,5 | 47,2 | 48,8 | 52,0 | 53,7 | - | - | - | - | - | - | - | - | - | - | - | 54,85 |
| 16 | - | - | - | 29,7 | 35,3 | 37,2 | 44,6 | 46,5 | 52,0 | 53,9 | 55,8 | 59,5 | 61,3 | 70,6 | - | - | - | - | - | - | - | - | - | - | 71,65 |
| 20 | - | - | - | - | - | 42,7 | 51,2 | 53,4 | 59,8 | 61,9 | 64,1 | 68,3 | 70,5 | 81,1 | 96,1 | 111,0 | - | - | - | - | - | - | - | - | 111,95 |
| 25 | - | - | - | - | - | - | 58,9 | 65,9 | 68,3 | 70,7 | 75,4 | 77,7 | 89,5 | 106,0 | 122,5 | 129,5 | 141,3 | 164,9 | 174,3 | - | - | - | - | - | 174,92 |
| 28 | - | - | - | - | - | - | - | 73,9 | 76,5 | 79,1 | 84,4 | 87,0 | 100,2 | 118,7 | 137,2 | 145,1 | 158,3 | 184,6 | 195,2 | 218,9 | - | - | - | - | 219,42 |
| 32 | - | - | - | - | - | - | - | - | - | - | - | 86,8 | 89,5 | 103,1 | 122,1 | 141,1 | 149,2 | 162,8 | 189,9 | 200,8 | 225,2 | 244,2 | 257,7 | 271,3 | 286,59 |

| OVERLAP SPLICE – DESIGN RESISTANCE* – CONCRETE C20/25, STEEL A-III (34GS) [kN] | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| l_b [mm] d_s [mm] | 200 | 210 | 240 | 250 | 300 | 310 | 375 | 380 | 400 | 420 | 460 | 480 | 500 | 540 | 600 | 620 | 700 | 750 | 770 | 800 | 850 | 900 | 960 | 1000 | Steel failure |
| 8 | 11,6 | 12,1 | 13,9 | 14,4 | 17,3 | 17,9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 17,91 |
| 10 | 14,4 | 15,2 | 17,3 | 18,1 | 21,7 | 22,4 | 27,1 | 27,4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 27,99 |
| 12 | 17,3 | 18,2 | 20,8 | 21,7 | 26,0 | 26,9 | 32,5 | 32,9 | 34,7 | 36,4 | 39,9 | - | - | - | - | - | - | - | - | - | - | - | - | - | 40,30 |
| 14 | - | 21,2 | 24,3 | 25,3 | 30,3 | 31,3 | 37,9 | 38,4 | 40,4 | 42,5 | 46,5 | 48,5 | 50,6 | 54,6 | - | - | - | - | - | - | - | - | - | - | 54,85 |
| 16 | - | - | 27,7 | 28,9 | 34,7 | 35,8 | 43,3 | 43,9 | 46,2 | 48,5 | 53,2 | 55,5 | 57,8 | 62,4 | 69,3 | 71,6 | - | - | - | - | - | - | - | - | 71,65 |
| 20 | - | - | - | - | 43,3 | 44,8 | 54,2 | 54,9 | 57,8 | 60,7 | 66,4 | 69,3 | 72,2 | 78,0 | 86,7 | 89,6 | 101,1 | 108,3 | 111,2 | - | - | - | - | - | 111,95 |
| 25 | - | - | - | - | - | - | 67,7 | 68,6 | 72,2 | 75,8 | 83,1 | 86,7 | 90,3 | 97,5 | 108,3 | 111,9 | 126,4 | 135,4 | 139,0 | 144,4 | 153,5 | 162,5 | 173,3 | - | 174,92 |
| 28 | - | - | - | - | - | - | - | - | - | 84,9 | 93,0 | 97,1 | 101,1 | 109,2 | 121,3 | 125,4 | 141,6 | 151,7 | 155,7 | 161,8 | 171,9 | 182,0 | 194,1 | 202,2 | 219,42 |
| 32 | - | - | - | - | - | - | - | - | - | - | - | 110,9 | 115,6 | 124,8 | 138,7 | 143,3 | 161,8 | 173,3 | 178,0 | 184,9 | 196,4 | 208,0 | 221,9 | 231,1 | 286,59 |

| OVERLAP SPLICE – DESIGN RESISTANCE* – CONCRETE C50/60, STEEL A-III (34GS) [kN] | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| l_b [mm] d_s [mm] | 200 | 210 | 240 | 260 | 280 | 300 | 330 | 350 | 375 | 380 | 400 | 420 | 480 | 500 | 520 | 600 | 650 | 700 | 740 | 800 | 830 | 900 | 950 | 1000 | Steel failure |
| 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 17,91 |
| 10 | 23,2 | 24,4 | 27,9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 27,99 |
| 12 | 27,9 | 29,3 | 33,5 | 36,2 | 39,0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 40,30 |
| 14 | - | 34,2 | 39,0 | 42,3 | 45,5 | 48,8 | 53,7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 54,85 |
| 16 | - | - | 44,6 | 48,3 | 52,0 | 55,8 | 61,3 | 65,1 | 69,7 | 70,6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 71,65 |
| 20 | - | - | - | - | - | 64,1 | 70,5 | 74,7 | 80,1 | 81,1 | 85,4 | 89,7 | 102,5 | 106,8 | 111,0 | - | - | - | - | - | - | - | - | - | 111,95 |
| 25 | - | - | - | - | - | - | - | - | 88,3 | 89,5 | 94,2 | 98,9 | 113,0 | 117,8 | 122,5 | 141,3 | 153,1 | 164,9 | 174,3 | - | - | - | - | - | 174,92 |
| 28 | - | - | - | - | - | - | - | - | - | - | - | 110,8 | 126,6 | 131,9 | 137,2 | 158,3 | 171,4 | 184,6 | 195,2 | 211,0 | 218,9 | - | - | - | 219,42 |
| 32 | - | - | - | - | - | - | - | - | - | - | - | - | 130,2 | 135,6 | 141,1 | 162,8 | 176,3 | 189,9 | 200,8 | 217,0 | 225,2 | 244,2 | 257,7 | 271,3 | 286,59 |

| ANCHORAGES – DESIGN RESISTANCE – CONCRETE C20/25, STEEL A-IIIN (RB500/BSt500S/BS500SP) [kN] | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| l_{bd} [mm] d_s [mm] | 120 | 150 | 160 | 180 | 200 | 230 | 250 | 290 | 300 | 360 | 370 | 400 | 460 | 470 | 560 | 600 | 660 | 700 | 750 | 800 | 850 | 900 | 940 | 1000 | Steel failure |
| 8 | 6,9 | 8,7 | 9,2 | 10,4 | 11,6 | 13,3 | 14,4 | 16,8 | 17,3 | 20,8 | 21,4 | - | - | - | - | - | - | - | - | - | - | - | - | - | 21,84 |
| 10 | - | 10,8 | 11,6 | 13,0 | 14,4 | 16,6 | 18,1 | 20,9 | 21,7 | 26,0 | 26,7 | 28,9 | 33,2 | 33,9 | - | - | - | - | - | - | - | - | - | - | 34,13 |
| 12 | - | - | - | 15,6 | 17,3 | 19,9 | 21,7 | 25,1 | 26,0 | 31,2 | 32,1 | 34,7 | 39,9 | 40,7 | 48,5 | - | - | - | - | - | - | - | - | - | 49,15 |
| 14 | - | - | - | - | 20,2 | 23,3 | 25,3 | 29,3 | 30,3 | 36,4 | 37,4 | 40,4 | 46,5 | 47,5 | 56,6 | 60,7 | 66,7 | - | - | - | - | - | - | - | 66,90 |
| 16 | - | - | - | - | - | 26,6 | 28,9 | 33,5 | 34,7 | 41,6 | 42,8 | 46,2 | 53,2 | 54,3 | 64,7 | 69,3 | 76,3 | 80,9 | 86,7 | - | - | - | - | - | 87,37 |
| 20 | - | - | - | - | - | - | - | 41,9 | 43,3 | 52,0 | 53,4 | 57,8 | 66,4 | 67,9 | 80,9 | 86,7 | 95,3 | 101,1 | 108,3 | 115,6 | 122,8 | 130,0 | 135,8 | - | 136,52 |
| 25 | - | - | - | - | - | - | - | - | - | 65,0 | 66,8 | 72,2 | 83,1 | 84,9 | 101,1 | 108,3 | 119,2 | 126,4 | 135,4 | 144,4 | 153,5 | 162,5 | 169,7 | 180,6 | 213,32 |
| 28 | - | - | - | - | - | - | - | - | - | - | - | 80,9 | 93,0 | 95,0 | 113,2 | 121,3 | 133,5 | 141,6 | 151,7 | 161,8 | 171,9 | 182,0 | 190,1 | 202,2 | 267,58 |
| 32 | - | - | - | - | - | - | - | - | - | - | - | - | 106,3 | 108,6 | 129,4 | 138,7 | 152,5 | 161,8 | 173,3 | 184,9 | 196,4 | 208,0 | 217,2 | 231,1 | 349,50 |

Basic performance data

| ANCHORAGES – DESIGN RESISTANCE – CONCRETE C50/60, STEEL A-IIIN (RB500/BSt500S/BS500SP) [kN] | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| l_{bd} [mm] d_s [mm] | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 230 | 280 | 290 | 310 | 350 | 390 | 410 | 450 | 470 | 500 | 630 | 750 | 800 | 850 | 900 | 950 | 1000 | Steel failure |
| 8 | 9,3 | 11,2 | 13,0 | 14,9 | 16,7 | 18,6 | 20,4 | 21,4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 21,84 |
| 10 | 11,6 | 13,9 | 16,3 | 18,6 | 20,9 | 23,2 | 25,6 | 26,7 | 32,5 | 33,7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 34,13 |
| 12 | - | 16,7 | 19,5 | 22,3 | 25,1 | 27,9 | 30,7 | 32,1 | 39,0 | 40,4 | 43,2 | 48,8 | - | - | - | - | - | - | - | - | - | - | - | - | 49,15 |
| 14 | - | - | 22,8 | 26,0 | 29,3 | 32,5 | 35,8 | 37,4 | 45,5 | 47,2 | 50,4 | 56,9 | 63,4 | 66,7 | - | - | - | - | - | - | - | - | - | - | 66,90 |
| 16 | - | - | - | 29,7 | 33,5 | 37,2 | 40,9 | 42,8 | 52,0 | 53,9 | 57,6 | 65,1 | 72,5 | 76,2 | 83,6 | 87,4 | - | - | - | - | - | - | - | - | 87,37 |
| 20 | - | - | - | - | - | 42,7 | 47,0 | 49,1 | 59,8 | 61,9 | 66,2 | 74,7 | 83,3 | 87,5 | 96,1 | 100,4 | 106,8 | 134,5 | - | - | - | - | - | - | 136,52 |
| 25 | - | - | - | - | - | - | - | - | 65,9 | 68,3 | 73,0 | 82,4 | 91,8 | 96,6 | 106,0 | 110,7 | 117,8 | 148,4 | 176,6 | 188,4 | 200,2 | 212,0 | - | - | 213,32 |
| 28 | - | - | - | - | - | - | - | - | - | - | 81,8 | 92,3 | 102,9 | 108,1 | 118,7 | 124,0 | 131,9 | 166,2 | 197,8 | 211,0 | 224,2 | 237,4 | 250,6 | 263,8 | 267,58 |
| 32 | - | - | - | - | - | - | - | - | - | - | - | - | 105,8 | 111,2 | 122,1 | 127,5 | 135,6 | 170,9 | 203,5 | 217,0 | 230,6 | 244,2 | 257,7 | 271,3 | 349,50 |

| OVERLAP SPLICE – DESIGN RESISTANCE* – CONCRETE C20/25, STEEL A-III (34GS) [kN] | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| l_b [mm] d_s [mm] | 200 | 210 | 240 | 250 | 300 | 310 | 375 | 380 | 400 | 420 | 460 | 480 | 500 | 540 | 600 | 620 | 700 | 750 | 770 | 800 | 850 | 900 | 960 | 1000 | Steel failure |
| 8 | 11,6 | 12,1 | 13,9 | 14,4 | 17,3 | 17,9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 17,91 |
| 10 | 14,4 | 15,2 | 17,3 | 18,1 | 21,7 | 22,4 | 27,1 | 27,4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 27,99 |
| 12 | 17,3 | 18,2 | 20,8 | 21,7 | 26,0 | 26,9 | 32,5 | 32,9 | 34,7 | 36,4 | 39,9 | - | - | - | - | - | - | - | - | - | - | - | - | - | 40,30 |
| 14 | - | 21,2 | 24,3 | 25,3 | 30,3 | 31,3 | 37,9 | 38,4 | 40,4 | 42,5 | 46,5 | 48,5 | 50,6 | 54,6 | - | - | - | - | - | - | - | - | - | - | 54,85 |
| 16 | - | - | 27,7 | 28,9 | 34,7 | 35,8 | 43,3 | 43,9 | 46,2 | 48,5 | 53,2 | 55,5 | 57,8 | 62,4 | 69,3 | 71,6 | - | - | - | - | - | - | - | - | 71,65 |
| 20 | - | - | - | - | 43,3 | 44,8 | 54,2 | 54,9 | 57,8 | 60,7 | 66,4 | 69,3 | 72,2 | 78,0 | 86,7 | 89,6 | 101,1 | 108,3 | 111,2 | - | - | - | - | - | 111,95 |
| 25 | - | - | - | - | - | - | 67,7 | 68,6 | 72,2 | 75,8 | 83,1 | 86,7 | 90,3 | 97,5 | 108,3 | 111,9 | 126,4 | 135,4 | 139,0 | 144,4 | 153,5 | 162,5 | 173,3 | - | 174,92 |
| 28 | - | - | - | - | - | - | - | - | - | 84,9 | 93,0 | 97,1 | 101,1 | 109,2 | 121,3 | 125,4 | 141,6 | 151,7 | 155,7 | 161,8 | 171,9 | 182,0 | 194,1 | 202,2 | 219,42 |
| 32 | - | - | - | - | - | - | - | - | - | - | - | 110,9 | 115,6 | 124,8 | 138,7 | 143,3 | 161,8 | 173,3 | 178,0 | 184,9 | 196,4 | 208,0 | 221,9 | 231,1 | 286,59 |

| OVERLAP SPLICE – DESIGN RESISTANCE – CONCRETE C50/60, STEEL A-IIIN (RB500/BSt500S/BS500SP) [kN] | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| l_b [mm] d_s [mm] | 200 | 210 | 230 | 240 | 290 | 300 | 330 | 350 | 375 | 390 | 410 | 420 | 470 | 480 | 550 | 600 | 630 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | Steel failure |
| 8 | 18,6 | 19,5 | 21,4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 21,84 |
| 10 | 23,2 | 24,4 | 26,7 | 27,9 | 33,7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 34,13 |
| 12 | 27,9 | 29,3 | 32,1 | 33,5 | 40,4 | 41,8 | 46,0 | 48,8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 49,15 |
| 14 | - | 34,2 | 37,4 | 39,0 | 47,2 | 48,8 | 53,7 | 56,9 | 61,0 | 63,4 | 66,7 | - | - | - | - | - | - | - | - | - | - | - | - | - | 66,90 |
| 16 | - | - | - | 44,6 | 53,9 | 55,8 | 61,3 | 65,1 | 69,7 | 72,5 | 76,2 | 78,1 | 87,4 | - | - | - | - | - | - | - | - | - | - | - | 87,37 |
| 20 | - | - | - | - | - | 64,1 | 70,5 | 74,7 | 80,1 | 83,3 | 87,5 | 89,7 | 100,4 | 102,5 | 117,4 | 128,1 | 134,5 | - | - | - | - | - | - | - | 136,52 |
| 25 | - | - | - | - | - | - | - | - | 88,3 | 91,8 | 96,6 | 98,9 | 110,7 | 113,0 | 129,5 | 141,3 | 148,4 | 164,9 | 176,6 | 188,4 | 200,2 | 212,0 | - | - | 213,32 |
| 28 | - | - | - | - | - | - | - | - | - | - | - | 110,8 | 124,0 | 126,6 | 145,1 | 158,3 | 166,2 | 184,6 | 197,8 | 211,0 | 224,2 | 237,4 | 250,6 | 263,8 | 267,58 |
| 32 | - | - | - | - | - | - | - | - | - | - | - | - | - | 130,2 | 149,2 | 162,8 | 170,9 | 189,9 | 203,5 | 217,0 | 230,6 | 244,2 | 257,7 | 271,3 | 349,50 |

Design performance data

POST INSTALLED REBARS

| Size | Ø8 | Ø10 | Ø12 | Ø14 | Ø16 | Ø20 | Ø25 | Ø28 | Ø32 |
|--------------------------------------|----------|----------------------|------|------|------|------|------|------|------|
| TENSION LOAD | | | | | | | | | |
| Mean ultimate bond resistance C12/15 | f_{bd} | [N/mm ²] | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| Mean ultimate bond resistance C16/20 | f_{bd} | [N/mm ²] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Mean ultimate bond resistance C20/25 | f_{bd} | [N/mm ²] | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 |
| Mean ultimate bond resistance C25/30 | f_{bd} | [N/mm ²] | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.30 |
| Mean ultimate bond resistance C30/37 | f_{bd} | [N/mm ²] | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 2.70 | 2.30 |
| Mean ultimate bond resistance C35/45 | f_{bd} | [N/mm ²] | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.00 | 2.70 |
| Mean ultimate bond resistance C40/50 | f_{bd} | [N/mm ²] | 3.70 | 3.70 | 3.70 | 3.70 | 3.40 | 3.00 | 2.70 |
| Mean ultimate bond resistance C45/50 | f_{bd} | [N/mm ²] | 3.70 | 3.70 | 3.70 | 3.70 | 3.40 | 3.00 | 2.70 |
| Mean ultimate bond resistance C50/60 | f_{bd} | [N/mm ²] | 3.70 | 3.70 | 3.70 | 3.70 | 3.40 | 3.00 | 2.70 |

Product commercial data

| Size | Product Code | Volume [ml] | Quantity [pcs] | | | Weight [kg] | | | Bar Codes |
|---------------------------|---------------------------|-------------|----------------|-------|--------|-------------|-------|---------------|---------------|
| | | | Box | Outer | Pallet | Box | Outer | Pallet | |
| Ø32 | R-KER-280 ¹⁾ | 280 | 10 | 10 | 840 | 5.7 | 5.7 | 511.4 | 5906675049663 |
| | R-KER-300 ¹⁾ | 300 | 10 | 10 | 840 | 6.3 | 6.3 | 559.2 | 5906675075167 |
| | R-KER-310 ¹⁾ | 310 | 10 | 10 | 840 | 6.5 | 6.5 | 573.7 | 5906675251851 |
| | R-KER-345 ¹⁾ | 345 | 10 | 10 | 840 | 7.1 | 7.1 | 623.3 | 5906675291086 |
| | R-KER-380 ¹⁾ | 380 | 10 | 10 | 560 | 8.2 | 8.2 | 486.6 | 5906675222707 |
| | R-KER-400 ¹⁾ | 400 | 10 | 10 | 560 | 8.1 | 8.1 | 483.8 | 5906675329444 |
| | R-KER-300-W ¹⁾ | 300 | 10 | 10 | 840 | 6.3 | 6.3 | 559.2 | 5906675432021 |
| | R-KER-380-W ¹⁾ | 380 | 10 | 10 | 560 | 8.2 | 8.2 | 486.6 | 5906675222981 |
| | R-KER-400-S ¹⁾ | 400 | 10 | 10 | 560 | 8.2 | 8.2 | 489.2 | 5906675380452 |
| | R-KER-380-S ¹⁾ | 380 | 10 | 10 | 560 | 6.5 | 6.5 | 391.2 | 5906675099088 |
| R-KER-400-W ¹⁾ | 400 | 10 | 10 | 560 | 8.2 | 8.2 | 489.2 | 5906675380445 | |

1) ETA-12/0319