BarSplice PRODUCTS INC.
SUBSIDIARY OF FC INDUSTRIES, INC.

## DOUBLE BARREL ZAP SCREWLOK® SYSTEM TEST DATA CONVERSION - 10M AND 15M (GRADE 400)

| Lab Report & Reference No. | | Bar Type | ASTM Bar Size Designation | ASTM Bar Area (in²) | Max Load (lb) | Max Stress (psi) | Developed Stress %$f_y$ ASTM Gr 60 (metric Gr 420) | Equivalent CSA Designation | CSA Bar Area (mm²) | Max Load (kN) | Equivalent Max Stress CSA Gr 400 (N/mm²) | Equivalent Developed Stress %$f_y$ CSA Gr 400 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4T1144 | 4A | BLACK | **No. 4** | 0.20 | 21,070 | 105,350 | **176%** | **10M** | 100 | 93.7 | 937 | **234%** |
| | 4B | | **No. 4** | 0.20 | 20,300 | 101,500 | **169%** | **10M** | 100 | 90.3 | 903 | **226%** |
| 4T2030 | 4A | BLACK | **No. 4** | 0.20 | 20,960 | 104,800 | **175%** | **10M** | 100 | 93.2 | 932 | **233%** |
| | 4B | | **No. 4** | 0.20 | 21,460 | 107,300 | **179%** | **10M** | 100 | 95.5 | 955 | **239%** |
| 4T3378 | 4A | BLACK | **No. 4** | 0.20 | 20,720 | 103,600 | **173%** | **10M** | 100 | 92.2 | 922 | **230%** |
| | 4B | | **No. 4** | 0.20 | 20,410 | 102,050 | **170%** | **10M** | 100 | 90.8 | 908 | **227%** |
| 4T1197 | 4A | EPOXY | **No. 4** | 0.20 | 20,160 | 100,800 | **168%** | **10M** | 100 | 89.7 | 897 | **224%** |
| | 4B | | **No. 4** | 0.20 | 19,790 | 98,950 | **165%** | **10M** | 100 | 88.0 | 880 | **220%** |
| 4T3098 | 4A | EPOXY | **No. 4** | 0.20 | 20,540 | 102,700 | **171%** | **10M** | 100 | 91.4 | 914 | **228%** |
| | 4B | | **No. 4** | 0.20 | 20,270 | 101,350 | **169%** | **10M** | 100 | 90.2 | 902 | **225%** |
| 5T7960 | 5A | BLACK | **No. 5** | 0.31 | 31,280 | 100,903 | **168%** | **15M** | 200 | 139.1 | 696 | **174%** |
| | 5B | | **No. 5** | 0.31 | 33,220 | 107,161 | **179%** | **15M** | 200 | 147.8 | 739 | **185%** |
| 5T8127 | 5A | BLACK | **No. 5** | 0.31 | 32,330 | 104,290 | **174%** | **15M** | 200 | 143.8 | 719 | **180%** |
| | 5B | | **No. 5** | 0.31 | 32,230 | 103,968 | **173%** | **15M** | 200 | 143.4 | 717 | **179%** |
| 5T8642 | 5A | BLACK | **No. 5** | 0.31 | 32,110 | 103,581 | **173%** | **15M** | 200 | 142.8 | 714 | **179%** |
| | 5B | | **No. 5** | 0.31 | 31,170 | 100,548 | **168%** | **15M** | 200 | 138.6 | 693 | **173%** |
| 5T1697 | 5A | EPOXY | **No. 5** | 0.31 | 33,070 | 106,677 | **178%** | **15M** | 200 | 147.1 | 735 | **184%** |
| | 5B | | **No. 5** | 0.31 | 32,340 | 104,323 | **174%** | **15M** | 200 | 143.8 | 719 | **180%** |
| 5T7871 | 5A | EPOXY | **No. 5** | 0.31 | 29,940 | 96,581 | **161%** | **15M** | 200 | 133.2 | 666 | **166%** |
| | 5B | | **No. 5** | 0.31 | 30,070 | 97,000 | **162%** | **15M** | 200 | 133.8 | 669 | **167%** |

**NOTES**

All splices meet Type 1 requirement of ACI 318 Section 25 (125% $f_y$) Grade 60 bar, and CSA A23.3 Clause 12.14.3.4 requirement (120% $f_y$) Grade 400 bar.
Results shown are from routine testing of various heat lots of completed coupler assemblies, per Barsplice Products, Inc. ISO 9001 Quality System.
Conducted on reinforcing bars per ASTM A615 (or *A706) Grade 60, with a specified yield, $f_y$ = 60,000 psi (420 N/mm²).
Tests performed in accordance with ASTM A1034, Section 10.3, Monotonic Tension Tests, using load rates per ASTM A370
See Lab reports for stress versus displacement curves (stress versus cross-head position).
ASTM = American Society for Testing and Materials, CSA = Canadian Standards Association

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## DOUBLE BARREL ZAP SCREWLOK® SYSTEM TEST DATA CONVERSION - 20M AND 25M (GRADE 400)

| Lab Report & Reference No. | | Bar Type | ASTM Bar Size Designation | ASTM Bar Area (in²) | Max Load (lb) | Max Stress (psi) | Developed Stress %$f_y$ ASTM Gr 60 (metric Gr 420) | Equivalent CSA Designation | CSA Bar Area (mm²) | Max Load (kN) | Equivalent Max Stress CSA Gr 400 (N/mm²) | Equivalent Developed Stress %$f_y$ CSA Gr 400 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6T5531 | 6A | BLACK | **No. 6** | 0.44 | 46,990 | 106,795 | **178%** | **20M** | 300 | 209.0 | 697 | **174%** |
| | 6B | | **No. 6** | 0.44 | 45,900 | 104,318 | **174%** | **20M** | 300 | 204.2 | 681 | **170%** |
| 6T5833 | 6A | BLACK | **No. 6** | 0.44 | 46,190 | 104,977 | **175%** | **20M** | 300 | 205.5 | 685 | **171%** |
| | 6B | | **No. 6** | 0.44 | 44,460 | 101,045 | **168%** | **20M** | 300 | 197.8 | 659 | **165%** |
| 6T5876 | 6A | BLACK | **No. 6** | 0.44 | 45,600 | 103,636 | **173%** | **20M** | 300 | 202.8 | 676 | **169%** |
| | 6B | | **No. 6** | 0.44 | 44,290 | 100,659 | **168%** | **20M** | 300 | 197.0 | 657 | **164%** |
| 6T2480 | 6A | EPOXY | **No. 6** | 0.44 | 45,040 | 102,364 | **171%** | **20M** | 300 | 200.3 | 668 | **167%** |
| | 6B | | **No. 6** | 0.44 | 46,590 | 105,886 | **176%** | **20M** | 300 | 207.2 | 691 | **173%** |
| 6T5473 | 6A | EPOXY | **No. 6** | 0.44 | 41,920 | 95,273 | **159%** | **20M** | 300 | 186.5 | 622 | **155%** |
| | 6B | | **No. 6** | 0.44 | 43,500 | 98,864 | **165%** | **20M** | 300 | 193.5 | 645 | **161%** |
| 8T1930* | 8A | BLACK | **No. 8** | 0.79 | 73,880 | 93,519 | **156%** | **25M** | 500 | 328.6 | 657 | **164%** |
| 8T1999* | 8A | BLACK | **No. 8** | 0.79 | 74,900 | 94,810 | **158%** | **25M** | 500 | 333.2 | 666 | **167%** |
| 8T2570 | 8A | BLACK | **No. 8** | 0.79 | 83,730 | 105,987 | **177%** | **25M** | 500 | 372.4 | 745 | **186%** |
| | 8B | | **No. 8** | 0.79 | 84,900 | 107,468 | **179%** | **25M** | 500 | 377.6 | 755 | **189%** |
| 8T3178 | 8A | BLACK | **No. 8** | 0.79 | 82,303 | 104,181 | **174%** | **25M** | 500 | 366.1 | 732 | **183%** |
| | 8B | | **No. 8** | 0.79 | 83,043 | 105,118 | **175%** | **25M** | 500 | 369.4 | 739 | **185%** |
| 8T1771 | 8A | EPOXY | **No. 8** | 0.79 | 76,710 | 97,101 | **162%** | **25M** | 500 | 341.2 | 682 | **171%** |
| | 8B | | **No. 8** | 0.79 | 74,960 | 94,886 | **158%** | **25M** | 500 | 333.4 | 667 | **167%** |
| 8T3081 | 8A | EPOXY | **No. 8** | 0.79 | 69,010 | 87,355 | **146%** | **25M** | 500 | 307.0 | 614 | **153%** |
| | 8B | | **No. 8** | 0.79 | 78,038 | 98,782 | **165%** | **25M** | 500 | 347.1 | 694 | **174%** |

**NOTES**

All splices meet Type 1 requirement of ACI 318 Section 25 (125% $f_y$) Grade 60 bar, and CSA A23.3 Clause 12.14.3.4 requirement (120% $f_y$) Grade 400 bar.
Results shown are from routine testing of various heat lots of completed coupler assemblies, per Barsplice Products, Inc. ISO 9001 Quality System.
Conducted on reinforcing bars per ASTM A615 (or *A706) Grade 60, with a specified yield, $f_y$ = 60,000 psi (420 N/mm²).
Tests performed in accordance with ASTM A1034, Section 10.3, Monotonic Tension Tests, using load rates per ASTM A370
See Lab reports for stress versus displacement curves (stress versus cross-head position).
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