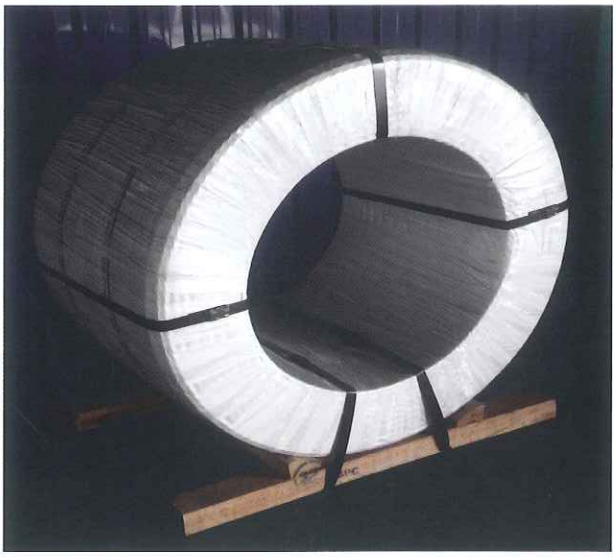
南達 Southern PC Steel
A Member of the Hong Leong Group



## PC Strand

The wire rod used by Southern PC Steel to produce its prestressing products comes from carefully selected quality plant. The rod is cold drawn in our special wire drawing process to various sizes. Stranding is done on our modern design machine to minimise torsional stress in the wire and to add to its ultimate uniform quality. During its last production operation which is the stabilising process, the strand is heated to blueing temperature. At this temperature the internal stress induced by wire drawing and stranding is released so that the finished strand has more uniform elastic properties and greater resistance to stress corrosion. In addition, it is also tensioned to a very high stress at elevated temperature. The result is a permanent elongation of approximately 1%, and an increase in yield strength of 5% over stress-relieved strand which means that Southern PC strand has very little remaining capacity for creep or relaxation.

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BUATAN MALAYSIA
MADE IN MALAYSIA

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# A Comparison of Specification for PC Strand

| STANDARD | GRADE | NOTATION | NOMINAL DIAMETER | DIAMETER TOLERANCE | CROSS SECTION AREA | | NOMINAL WEIGHT | | PITCH | MIN. BREAKING LOAD | MIN. PROOF LOAD | | MIN. YIELD STRENGTH | MIN ELONG. | LOW RELAXATION | | | TIME | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | 0.1% | 0.2% | | | | | | | |
| | | | mm. | mm. | $mm.^2$ | | kg/1000m. | TOLERANCE | | kN. | kN. | kN. | kN. | % | 60% | 70% | 80% | hrs. | |
| MS 1138:2007 (Part 4) | 1720 | 7 WIRE ORDINARY | 9.3 | - | 51.6 | - | 405 | +4% -2% | 12-18D | 88.8 | - | 75.3 | - | 3.5 | 1.0% (Max.) | 2.5% (Max.) | 4.5% (Max.) | 1000 | * Initial force (60%, 70% or 80%) of min. breaking load |
| | 1860 | | 9.53 | | 54.8 | | 432 | | | 102 | | 86.6 | | | | | | | |
| | 1860 | | 12.7 | | 98.7 | | 774 | | | 184 | | 156.0 | | | | | | | |
| | 1860 | | 12.9 | | 100.0 | | 785 | | | 186 | | 158.0 | | | | | | | |
| | 1720 | | 15.2 | | 139.0 | | 1101 | | | 239 | | 203.0 | | | | | | | |
| | 1860 | | 15.2 | | 139.0 | | 1101 | | | 259 | | 220.0 | | | | | | | |
| | 1770 | | 15.7 | | 150.0 | | 1180 | | | 265 | | 225.0 | | | | | | | |
| ASTM A416/A416M-12a | 250 | - | 9.5 | ± 0.40 | 52.0 | - | 405 | - | 12-16D | 89 | - | - | 80.1 | 3.5 | - | 2.5% (Max.) | 3.5% (Max.) | 1000 | * Initial force (70% or 80%) of min. breaking load |
| | | | 12.7 | | 92.9 | | 730 | | | 160 | | | 144.1 | | | | | | |
| | | | 15.2 | | 139.0 | | 1090 | | | 240 | | | 216.2 | | | | | | |
| | 270 | | 9.53 | + 0.65 - 0.15 | 55.0 | | 430 | | | 102 | | | 92.1 | | | | | | |
| | | | 12.7 | | 98.7 | | 780 | | | 184 | | | 165.3 | | | | | | |
| | | | 15.2 | | 140.0 | | 1100 | | | 261 | | | 234.6 | | | | | | |
| | | | 15.7 | | 150.0 | | 1200 | | | 279 | | | 251.4 | | | | | | |
| BS 5896 : 1980 (Amended 2007) | 1860 | 7 WIRE STANDARD | 15.2 | + 0.40 | 139 | +4% -2% | 1090 | +4% -2% | 12-18D | 259 | 220 | - | 228 | 3.5 | 1.0% (Max.) | 2.5% (Max.) | 4.5% (Max.) | 1000 | * Initial force (60% , 70% or 80%) of actual breaking load |
| | 1670 | | 15.2 | - 0.20 | 139 | | 1090 | | | 232 | 197 | | 204 | | | | | | |
| | 1860 | | 9.3 | + 0.30 | 52 | | 408 | | | 97 | 82 | | 85 | | | | | | |
| | 1770 | | 9.3 | - 0.15 | 52 | | 408 | | | 92 | 78 | | 81 | | | | | | |
| | 1860 | 7 WIRE SUPER | 15.7 | + 0.40 | 150 | | 1180 | | | 279 | 237 | | 246 | | | | | | |
| | 1770 | | 15.7 | - 0.20 | 150 | | 1180 | | | 265 | 225 | | 233 | | | | | | |
| | 1860 | | 12.9 | | 100 | | 785 | | | 186 | 158 | | 163 | | | | | | |
| | 1860 | | 9.6 | + 0.30 - 0.15 | 55 | | 432 | | | 102 | 87 | | 90 | | | | | | |
| AS/NZS 4672.1.2007 | 1850 | 7 WIRE ORDINARY | 9.5 | - | 55 | - | 432 | +4% -2% | 12-18D | 102 | 83.6 | 86.6 | - | 3.5 | - | 2.5% (Max.) | 3.5% (Max.) | 1000 | * Initial force (70% or 80%) of min. breaking load |
| | 1870 | | 12.7 | | 98.6 | | 774 | | | 184 | 151 | 156 | | | | | | | |
| | 1750 | | 15.2 | | 143 | | 1122 | | | 250 | 205 | 212 | | | | | | | |
| | 1830 | | 15.2 | | 143 | | 1122 | | | 261 | 214 | 222 | | | | | | | |