



| Prolock sheet | PVC                                          |              |             |                              |
|---------------|----------------------------------------------|--------------|-------------|------------------------------|
|               | Bending stiffness                            | $EI_{rep}$   | 368.7E+04   | [lb.ft.in <sup>2</sup> /ft'] |
|               | Max. characteristic moment                   | $M_{ik}$     | 3.00        | [kip.ft/ft']                 |
|               | Max. representative moment (long/short term) | $M_{i,rep}$  | 1.35 / 1.50 | [kip.ft/ft']                 |
|               | Modification factor (long/short term)        | $K_{mod}$    | 0.45 / 0.5  | [-]                          |
|               | Material factor                              | $\gamma_m$   | 1.2         | [-]                          |
|               | Height                                       | $h$          | 4.72        | [in]                         |
|               | Width                                        | $b$          | 19.7        | [in]                         |
|               | Section area                                 | $A$          | 4.77        | [in <sup>2</sup> /ft']       |
|               | Section modulus                              | $W_k$        | 4.14        | [in <sup>3</sup> /ft']       |
|               | Moment Inertia                               | $I_y$        | 9.78        | [in <sup>4</sup> /ft']       |
|               | Characteristic yield strength                | $f_{m0,rep}$ | 8.70        | [ksi]                        |
|               | Max. design moment (long/short term)         | $M_{d,el}$   | 1.1 / 1.3   | [kip.ft/ft']                 |

| PVC | Characteristic yield strength  | $f_{m0,rep}$ | 8.70 | [ksi]                 |
|-----|--------------------------------|--------------|------|-----------------------|
|     | Material factor                | $\gamma_m$   | 1.2  | [-]                   |
|     | Modification factor long term  | $K_{mod}$    | 0.45 | [-]                   |
|     | Modification factor short term | $K_{mod}$    | 0.5  | [-]                   |
|     | Shrink factor                  | $K_{def}$    | 1.5  | < 15]                 |
|     |                                | $K_{def}$    | 2.3  | > 15]                 |
|     | flexural strength              | $f_{u,d}$    | 3.26 | [ksi]                 |
|     |                                | $f_{u,d}$    | 3.63 | [ksi]                 |
|     | E modulus                      | $E_{ep}$     | 377  | [ksi]                 |
|     | Weight (square foot)           | $G$          | 3.0  | [lb/ft <sup>2</sup> ] |
|     | Weight (foot)                  | $G$          | 4.8  | [lb/ft']              |

| Piles |                                              | Soft wood    | Soft wood   | Soft wood   | Soft wood   | Azobé       | Azobé       | Azobé       | Azobé       | Steel 235   | Steel 235 | Steel 235 | Steel 235 | Steel 355 |           |
|-------|----------------------------------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|-----------|-----------|-----------|-----------|
|       | Quality                                      |              | c18         | c18         | c24         | C24         | D70         | D70         | D70         | D70         | s235      | s235      | s235      | S235      | S355      |
|       | Form                                         |              | ●           | ●           | ●           | ●           | ■           | ■           | ■           | ■           | O         | O         | O         | O         | O         |
|       | Dimension                                    | $D_{out}$    | 3.94        | 3.94        | 3.94        | 3.94        | 2.76        | 2.76        | 2.99        | 2.99        | 3.50      | 3.50      | 3.50      | 3.50      | 3.50      |
|       | Wall thickness                               | $d$          |             |             |             |             |             |             |             |             | 0.12      | 0.12      | 0.19      | 0.19      | 0.19      |
|       | Quantity                                     |              | 6.56        | 13.12       | 6.56        | 13.12       | 6.56        | 13.12       | 6.56        | 13.12       | 6.56      | 13.12     | 6.56      | 13.12     | 13.12     |
|       | Bending stiffness                            | $EI_{rep}$   | 938E+04     | 1,877E+04   | 1,147E+04   | 2,294E+04   | 850E+04     | 1,700E+04   | 1,181E+04   | 2,362E+04   | 3,335E+04 | 6,670E+04 | 5,061E+04 | 1,012E+05 | 1,012E+05 |
|       | Max. characteristic moment                   | $M_{ik}$     | 0.79        | 1.59        | 1.06        | 2.12        | 1.80        | 3.60        | 2.30        | 4.61        | 1.78      | 3.55      | 2.70      | 5.39      | 8.15      |
|       | Max. representative moment (long/short term) | $M_{i,rep}$  | 0.47 / 0.60 | 0.95 / 1.21 | 0.63 / 0.80 | 1.26 / 1.61 | 0.99 / 1.26 | 1.98 / 2.52 | 1.27 / 1.61 | 2.53 / 3.22 | 1.78      | 3.55      | 2.70      | 5.39      | 8.15      |
|       | Modification factor (long/short term)        | $K_{mod}$    | 0.60 / 0.76 | 0.60 / 0.76 | 0.60 / 0.76 | 0.60 / 0.76 | 0.55 / 0.70 | 0.55 / 0.70 | 0.55 / 0.70 | 0.55 / 0.70 | 1.00      | 1.00      | 1.00      | 1.00      | 1.00      |
|       | Material factor (long/short term)            | $\gamma_m$   | 1.3         | 1.3         | 1.3         | 1.3         | 1.3         | 1.3         | 1.3         | 1.3         | 1.0       | 1.0       | 1.0       | 1.0       | 1.0       |
|       | Section area                                 | $A$          | 7.42        | 14.84       | 7.42        | 14.84       | 4.63        | 9.26        | 5.46        | 10.92       | 0.76      | 1.53      | 1.21      | 2.42      | 2.42      |
|       | Section modulus                              | $W_k$        | 3.65        | 7.30        | 3.65        | 7.30        | 2.13        | 4.25        | 2.72        | 5.44        | 0.63      | 1.25      | 0.95      | 1.90      | 1.90      |
|       | Characteristic yield strength                | $f_{m0,rep}$ | 2.61        | 2.61        | 3.48        | 3.48        | 10.15       | 10.15       | 10.15       | 10.15       | 34.08     | 34.08     | 34.08     | 34.08     | 51.49     |
|       | Max. design moment (long/short term)         | $M_{d,el}$   | 0.36 / 0.46 | 0.73 / 0.93 | 0.49 / 0.62 | 0.97 / 1.24 | 0.76 / 0.97 | 1.52 / 1.94 | 0.97 / 1.24 | 1.95 / 2.48 | 1.78      | 3.55      | 2.70      | 5.39      | 8.15      |
|       |                                              |              |             |             |             |             |             |             |             |             |           |           |           |           |           |

| Combined Sheet piles | Bending stiffness                            | $EI_{rep}$  | 1,307E+04   | 2,246E+04   | 1,516E+04   | 2,663E+04   | 1,219E+04   | 2,069E+04   | 1,550E+04   | 2,731E+04   | 3,704E+04   | 7,039E+04   | 5,430E+04   | 1,049E+05   | 1,049E+05   | [lb.ft.in <sup>2</sup> /ft'] |
|----------------------|----------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------------------|
|                      | Max. characteristic moment                   | $M_{ik}$    | 3.80        | 4.59        | 4.06        | 5.12        | 4.80        | 6.60        | 5.30        | 7.61        | 4.78        | 6.56        | 5.70        | 8.40        | 11.15       | [kip.ft/ft']                 |
|                      | Max. representative moment (long/short term) | $M_{i,rep}$ | 1.82 / 2.10 | 2.30 / 2.71 | 1.98 / 2.30 | 2.61 / 3.11 | 2.34 / 2.76 | 3.33 / 4.02 | 2.62 / 3.11 | 3.88 / 4.72 | 3.13 / 3.28 | 4.90 / 5.05 | 4.05 / 4.20 | 6.74 / 6.89 | 9.50 / 9.65 | [kip.ft/ft']                 |
|                      | Modification factor (long/short term)        | $K_{mod}$   | 0.48 / 0.55 | 0.50 / 0.59 | 0.49 / 0.57 | 0.51 / 0.61 | 0.49 / 0.57 | 0.50 / 0.61 | 0.49 / 0.59 | 0.51 / 0.62 | 0.65 / 0.69 | 0.75 / 0.77 | 0.71 / 0.74 | 0.80 / 0.82 | 0.85 / 0.87 | [-]                          |
|                      | Material factor (long/short term)            | $\gamma_m$  | 1.22 / 1.23 | 1.24 / 1.06 | 1.23 / 1.06 | 1.25 / 1.05 | 1.24 / 1.05 | 1.26 / 1.04 | 1.25 / 1.05 | 1.26 / 1.04 | 1.08 / 1.03 | 1.05 / 1.02 | 1.06 / 1.03 | 1.03 / 1.02 | 1.02 / 1.01 | [-]                          |
|                      | Width                                        | $b$         | 19.7        | 19.7        | 19.7        | 19.7        | 19.7        | 19.7        | 19.7        | 19.7        | 19.7        | 19.7        | 19.7        | 19.7        | 19.7        | [in]                         |
|                      | Section area                                 | $A$         | 12.19       | 19.61       | 12.19       | 19.61       | 9.40        | 14.03       | 10.23       | 15.68       | 5.53        | 6.30        | 5.98        | 7.19        | 7.19        | [in <sup>2</sup> /ft']       |
|                      | Section modulus                              | $W_k$       | 7.79        | 11.44       | 7.79        | 11.44       | 6.27        | 8.39        | 6.86        | 9.58        | 4.76        | 5.39        | 5.09        | 6.04        | 6.04        | [in <sup>3</sup> /ft']       |
|                      | Max. design moment (long/short term)         | $M_{d,el}$  | 1.49 / 1.71 | 1.85 / 2.18 | 1.61 / 1.87 | 2.10 / 2.49 | 1.89 / 2.22 | 2.65 / 3.19 | 2.10 / 2.49 | 3.07 / 3.73 | 2.90 / 3.03 | 4.68 / 4.80 | 3.82 / 3.95 | 6.52 / 6.64 | 9.27 / 9.40 | [kip.ft/ft']                 |
|                      |                                              |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                              |
|                      |                                              |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                              |