

Surefoot Micropile Indicative Capacity in Various Soils (V8.5) Based on pile embedment of 1930mm

| Pile Cap | | Sand | | | | | | Clay | | | | | | | |
|----------|--------------------------|--------------------|--------|--------------|--------|---------|--------|---------|--------|---------|--------|---------|--------|------------|--------|
| Model | Max Capacity in kN(Rec.) | Loose | | Medium Dense | | Dense | | Soft | | Firm | | Stiff | | Very Stiff | |
| | | Piles Capacity(kN) | | | | | | | | | | | | | |
| | | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift |
| T150 | 35 | 32 | 9 | 89 | 14 | 99 | 18 | 24 | 18 | 61 | 42 | 77 | 53 | 100 | 74 |
| S150 | 25 | 35 | 10 | 88 | 16 | 97 | 20 | 26 | 20 | 67 | 47 | 85 | 58 | 103 | 81 |
| S250 | 75 | 43 | 13 | 119 | 19 | 132 | 24 | 32 | 24 | 82 | 57 | 103 | 71 | 133 | 99 |
| S250-6 | 100 | 65 | 19 | 178 | 29 | 197 | 36 | 48 | 36 | 123 | 85 | 155 | 107 | 200 | 148 |
| S250-8 | 100 | 87 | 26 | 237 | 39 | 264 | 49 | 64 | 48 | 164 | 114 | 206 | 142 | 266 | 198 |
| S400-6 | 180 | 65 | 19 | 178 | 29 | 197 | 36 | 48 | 36 | 123 | 85 | 155 | 107 | 200 | 148 |
| S400-8 | 180 | 87 | 26 | 237 | 39 | 264 | 49 | 64 | 48 | 164 | 114 | 206 | 142 | 266 | 198 |
| S400-12 | 200 | 130 | 39 | 359 | 59 | 394 | 72 | 96 | 72 | 245 | 170 | 310 | 214 | 400 | 296 |
| S500-8 | 250 | 87 | 26 | 237 | 39 | 264 | 49 | 64 | 48 | 164 | 114 | 206 | 142 | 266 | 198 |
| S500-12 | 250 | 130 | 39 | 359 | 59 | 394 | 72 | 96 | 72 | 250 | 170 | 310 | 214 | 400 | 296 |
| S600-16 | 300 | 174 | 52 | 476 | 79 | 528 | 98 | 128 | 96 | 328 | 228 | 412 | 284 | 531 | 395 |

| SOIL TYPE | | SOIL PARAMETERS | | | |
|-----------|--------------|-------------------------------|--------|----------|----------|
| | | γ (KN/m ³) | ϕ | Cu (kPa) | Es (MPa) |
| SAND | LOOSE | 14 | 26 | 0 | 10 |
| | MEDIUM DENSE | 17 | 34 | 0 | 30 |
| | DENSE | 19 | 37 | 0 | 45 |
| CLAY | SOFT | 14 | 0 | 12 | 10 |
| | FIRM | 16 | 0 | 35 | 35 |
| | STIFF | 17 | 0 | 45 | 40 |
| | VERY STIFF | 18 | 0 | 65 | 55 |

Please note:

- 1 These tables are not to be distributed
- 2 These tables are not to be used for design, please refer to Surefoot design engineer.
- 3 These tables are to be used for indicative purposes only. Projects must be analysed on an individual basis.
- 4 These tables are obtained using **Surefoot V8.5 Spreadsheet**.
- 5 These values are approximately at 95% of capacity utilisation.
- 6 These tables are based on analysis of pile full embedment in a homogeneous-single layer with the parameters listed, and not in combination load (e.g., gravity only or

Surefoot Micropile Indicative Capacity in Various Soils (V8.5) Based on pile embedment of 1630mm

| Pile Cap | | Sand | | | | | | Clay | | | | | | | |
|----------|--------------------------|--------------------|--------|--------------|--------|---------|--------|---------|--------|---------|--------|---------|--------|------------|--------|
| Model | Max Capacity in kN(Rec.) | Loose | | Medium Dense | | Dense | | Soft | | Firm | | Stiff | | Very Stiff | |
| | | Piles Capacity(kN) | | | | | | | | | | | | | |
| | | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift |
| T150 | 35 | 23 | 6 | 66 | 10 | 99 | 12 | 19 | 14 | 50 | 34 | 64 | 43 | 91 | 61 |
| S150 | 25 | 25 | 7 | 72 | 11 | 97 | 14 | 21 | 16 | 55 | 38 | 70 | 48 | 99 | 67 |
| S250 | 75 | 30 | 9 | 88 | 13 | 132 | 17 | 26 | 19 | 67 | 46 | 85 | 58 | 121 | 81 |
| S250-6 | 100 | 46 | 13 | 133 | 20 | 197 | 25 | 39 | 29 | 101 | 69 | 128 | 87 | 181 | 122 |
| S250-8 | 100 | 61 | 18 | 176 | 27 | 264 | 34 | 52 | 38 | 135 | 93 | 170 | 116 | 241 | 163 |
| S400-6 | 180 | 46 | 13 | 133 | 20 | 197 | 25 | 39 | 29 | 101 | 69 | 128 | 87 | 181 | 122 |
| S400-8 | 180 | 61 | 18 | 176 | 27 | 264 | 34 | 52 | 38 | 135 | 93 | 170 | 116 | 241 | 163 |
| S400-12 | 200 | 92 | 27 | 265 | 41 | 394 | 50 | 78 | 58 | 202 | 138 | 256 | 174 | 361 | 245 |
| S500-8 | 250 | 61 | 18 | 176 | 27 | 264 | 34 | 52 | 38 | 135 | 93 | 170 | 116 | 241 | 163 |
| S500-12 | 250 | 92 | 27 | 265 | 41 | 394 | 50 | 78 | 58 | 202 | 138 | 256 | 174 | 361 | 245 |
| S600-16 | 300 | 122 | 36 | 355 | 55 | 528 | 68 | 104 | 76 | 268 | 185 | 340 | 232 | 485 | 325 |

| SOIL TYPE | | SOIL PARAMETERS | | | |
|-----------|--------------|-------------------------------|--------|----------|----------|
| | | γ (KN/m ³) | ϕ | Cu (kPa) | Es (MPa) |
| SAND | LOOSE | 14 | 26 | 0 | 10 |
| | MEDIUM DENSE | 17 | 34 | 0 | 30 |
| | DENSE | 19 | 37 | 0 | 45 |
| CLAY | SOFT | 14 | 0 | 12 | 10 |
| | FIRM | 16 | 0 | 35 | 35 |
| | STIFF | 17 | 0 | 45 | 40 |
| | VERY STIFF | 18 | 0 | 65 | 55 |

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Surefoot Micropile Indicative Capacity in Various Soils (V8.5) Based on pile embedment of 1450mm

| Pile Cap | | Sand | | | | | | Clay | | | | | | | |
|----------|--------------------------|---------|--------|--------------|--------|---------|--------|---------|--------|---------|--------|---------|--------|------------|--------|
| Model | Max Capacity in kN(Rec.) | Loose | | Medium Dense | | Dense | | Soft | | Firm | | Stiff | | Very Stiff | |
| | | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift | Gravity | Uplift |
| T150 | 35 | 17 | 5 | 52 | 8 | 84 | 10 | 16 | 12 | 44 | 30 | 56 | 38 | 79 | 53 |
| S150 | 25 | 19 | 5 | 56 | 8 | 91 | 10 | 18 | 13 | 48 | 33 | 61 | 41 | 87 | 58 |
| S250 | 75 | 23 | 7 | 69 | 10 | 112 | 13 | 22 | 16 | 59 | 40 | 74 | 50 | 106 | 71 |
| S250-6 | 100 | 35 | 10 | 103 | 16 | 167 | 20 | 33 | 24 | 88 | 60 | 112 | 76 | 159 | 107 |
| S250-8 | 100 | 47 | 14 | 138 | 21 | 223 | 26 | 45 | 33 | 118 | 80 | 148 | 100 | 212 | 142 |
| S400-6 | 180 | 35 | 10 | 103 | 16 | 167 | 20 | 33 | 24 | 88 | 60 | 112 | 76 | 159 | 107 |
| S400-8 | 180 | 47 | 14 | 138 | 21 | 223 | 26 | 44 | 32 | 118 | 80 | 148 | 100 | 212 | 142 |
| S400-12 | 200 | 71 | 21 | 206 | 32 | 334 | 40 | 66 | 48 | 176 | 120 | 224 | 152 | 317 | 213 |
| S500-8 | 250 | 47 | 14 | 138 | 21 | 223 | 26 | 44 | 32 | 118 | 80 | 148 | 100 | 212 | 142 |
| S500-12 | 250 | 71 | 21 | 206 | 32 | 334 | 40 | 66 | 48 | 176 | 120 | 224 | 152 | 317 | 213 |
| S600-16 | 300 | 95 | 28 | 276 | 43 | 446 | 52 | 90 | 66 | 236 | 160 | 296 | 200 | 425 | 285 |

| SOIL TYPE | | SOIL PARAMETERS | | | |
|-----------|--------------|-------------------------------|--------|----------|----------|
| | | γ (KN/m ³) | ϕ | Cu (kPa) | Es (MPa) |
| SAND | LOOSE | 14 | 26 | 0 | 10 |
| | MEDIUM DENSE | 17 | 34 | 0 | 30 |
| | DENSE | 19 | 37 | 0 | 45 |
| CLAY | SOFT | 14 | 0 | 12 | 10 |
| | FIRM | 16 | 0 | 35 | 35 |
| | STIFF | 17 | 0 | 45 | 40 |
| | VERY STIFF | 18 | 0 | 65 | 55 |

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