

M27500 Cables—types SA and TA (M22759/7, /8 components)

M27500 SA and TA cables are shielded and jacketed cables with PTFE tape or extruded PFA jackets, incorporating MIL-W-22759/7 or /8 wires. These component wires are insulated with light-weight mineral-filled PTFE, and have silver-plated or nickel-plated copper conductors.

Versions with PTFE tape jackets are available with our unique **Seamless Wrap** PTFE tape (see page 87 for details).

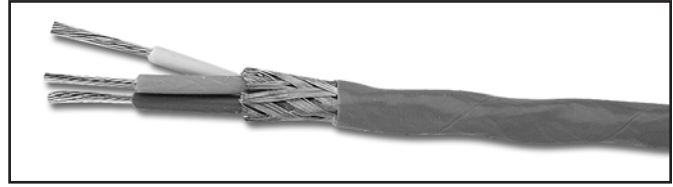
Performance:

Voltage rating: 600V.

Temperature ratings:

Cables with /7 component wires: -55 to 200° C.
Cables with /8 component wires: -55 to 260° C.

See page 38 for component wire dimensions.



Construction Details

Component wire conductor:

/7 component wires: Silver-plated copper;
/8 component wires: Nickel-plated copper.

Component wire insulation:

Extruded PTFE with abrasion-resistant mineral fillers.

Shield: Nickel- or silver-plated copper braid, 85% coverage.

Jacket: Extruded PFA or PTFE tape.

Colors: Color coded to M27500 (see page 67).

Certifications also available to NEMA WC27500.

Part Numbers:

M 27 500 - 8 TA 1 N 06

Component wire AWG — 8
Component wire type — TA: MIL-W-22759/8
Shield material — N: Nickel-plated copper
Number of component wires — 1
Jacket material — 06: White PTFE tape
20: White extruded PFA
S: Silver-plated copper
21: Clear extruded PFA

Dimensions and Weight—1 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
8 (133/29)	.240 (6.10)	.264 (6.71)	95.9 (143)
10 (37/26)	.178 (4.52)	.202 (5.13)	56.2 (83.6)
12 (19/25)	.154 (3.91)	.178 (4.52)	41.9 (62.4)
14 (19/27)	.135 (3.43)	.159 (4.04)	30.0 (44.6)
16 (19/29)	.122 (3.10)	.146 (3.71)	23.7 (35.3)
18 (19/30)	.112 (2.84)	.134 (3.40)	20.6 (30.7)
20 (19/32)	.102 (2.59)	.126 (3.20)	16.6 (24.7)
22 (19/34)	.093 (2.36)	.117 (2.97)	13.9 (20.7)
24 (19/36)	.082 (2.08)	.106 (2.69)	11.1 (16.5)

Dimensions and Weight—2 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
8 (133/29)	.468 (11.9)	.504 (12.8)	199 (296)
10 (37/26)	.344 (8.74)	.380 (9.65)	112 (166)
12 (19/25)	.288 (7.32)	.312 (7.92)	79.4 (118)
14 (19/27)	.250 (6.35)	.274 (6.96)	58.6 (87.2)
16 (19/29)	.224 (5.69)	.248 (6.30)	46.1 (68.6)
18 (19/30)	.204 (5.18)	.228 (5.79)	39.0 (58.0)
20 (19/32)	.184 (4.67)	.208 (5.28)	31.5 (46.9)
22 (19/34)	.166 (4.22)	.190 (4.83)	25.7 (38.2)
24 (19/36)	.144 (3.66)	.168 (4.27)	20.5 (30.6)

Dimensions and Weight—3 Conductor Cables*

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
8 (133/29)	.501 (12.7)	.537 (13.6)	283 (421)
10 (37/26)	.368 (9.34)	.404 (10.3)	162 (241)
12 (19/25)	.308 (7.83)	.344 (8.74)	114 (169)
14 (19/27)	.267 (6.79)	.291 (7.40)	81.6 (121)
16 (19/29)	.239 (6.08)	.263 (6.69)	62.5 (93.0)
18 (19/30)	.218 (5.53)	.242 (6.14)	52.8 (78.6)
20 (19/32)	.196 (4.99)	.220 (5.60)	42.2 (62.8)
22 (19/34)	.177 (4.49)	.201 (5.10)	33.8 (50.3)
24 (19/36)	.153 (3.89)	.177 (4.50)	26.6 (39.6)

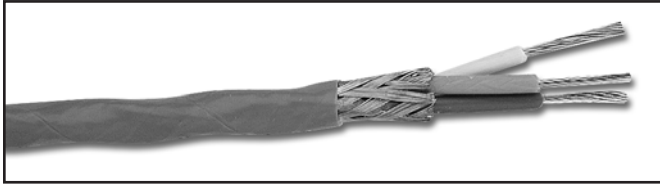
Dimensions and Weight—4 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
8 (133/29)	.558 (14.2)	.594 (15.1)	378 (562)
10 (37/26)	.409 (10.4)	.445 (11.3)	208 (309)
12 (19/25)	.351 (8.91)	.387 (9.83)	153 (227)
14 (19/27)	.297 (7.55)	.333 (8.46)	106 (157)
16 (19/29)	.266 (6.75)	.290 (7.36)	79.2 (117)
18 (19/30)	.242 (6.14)	.266 (6.75)	66.2 (98.5)
20 (19/32)	.218 (5.53)	.242 (6.14)	52.4 (78.0)
22 (19/34)	.196 (4.98)	.220 (5.59)	41.6 (61.9)
24 (19/36)	.169 (4.30)	.193 (4.91)	32.4 (48.2)

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). All values are nominal, for style 06 (PTFE tape jacket) cables.

*Using factors from a circumscribed circle per M27500.

M27500 Cables—types RC and RE (M22759/11, /12 components)



Construction Details

Component wire conductor:

/11 component wires: Silver-plated copper;
/12 component wires: Nickel-plated copper.

Component wire insulation: Extruded PTFE.

Shield: Nickel- or silver-plated copper braid, 85% coverage.

Jacket: Extruded FEP or PTFE tape.

Colors: Color coded to M27500 (see page 67).

Certifications also available to NEMA WC27500.

M27500 RC and RE cables are shielded and jacketed cables with PTFE tape or extruded FEP jackets, incorporating MIL-W-22759/11 or /12 wires.

These component wires have extruded PTFE insulation and silver- or nickel-plated copper conductors.

PTFE tape jackets are available with our unique **Seamless Wrap** PTFE tape (see page 87 for details).

Performance:

Voltage rating: 600V.

Temperature ratings:

Cables with /11 component wires and either jacket: -55 to 200° C.
Cables with /12 component wires and PTFE jacket: -55 to 260° C.
Cables with /12 component wires and FEP jacket: -55 to 200° C.

See page 40 for component wire dimensions.

Part Numbers:

M27500 - 8 RC 1 S 06

- Component wire AWG: 8
- Component wire type: RC (MIL-W-22759/11) or RE (MIL-W-22759/12)
- Shield material: N (Nickel-plated copper) or S (Silver-plated copper)
- Number of component wires: 1
- Jacket material: 05 (Clear extruded FEP), 06 (White PTFE tape), or 09 (White extruded FEP)

Dimensions and Weight—1 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
8 (133/29)	.222 (5.64)	.246 (6.25)	83.3 (124)
10 (37/26)	.155 (3.94)	.179 (4.55)	47.8 (71.1)
12 (19/25)	.127 (3.23)	.149 (3.78)	32.2 (47.9)
14 (19/27)	.106 (2.69)	.128 (3.25)	22.6 (33.6)
16 (19/29)	.091 (2.31)	.113 (2.87)	16.5 (24.6)
18 (19/30)	.084 (2.13)	.106 (2.69)	14.5 (21.6)
20 (19/32)	.074 (1.88)	.096 (2.44)	11.0 (16.4)
22 (19/34)	.065 (1.65)	.087 (2.21)	8.90 (13.2)
24 (19/36)	.059 (1.50)	.081 (2.06)	7.01 (10.4)
26 (19/38)	.054 (1.37)	.076 (1.93)	6.20 (9.23)
28 (7/36)	.049 (1.24)	.071 (1.80)	5.50 (8.19)

Dimensions and Weight—2 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
8 (133/29)	.432 (11.0)	.468 (11.9)	170 (253)
10 (37/26)	.298 (7.57)	.335 (8.51)	95.4 (142)
12 (19/25)	.238 (6.05)	.262 (6.65)	64.6 (96.1)
14 (19/27)	.196 (4.98)	.220 (5.59)	44.9 (66.8)
16 (19/29)	.166 (4.22)	.190 (4.83)	32.1 (47.8)
18 (19/30)	.152 (3.86)	.176 (4.47)	27.2 (40.5)
20 (19/32)	.132 (3.35)	.156 (3.96)	19.4 (28.9)
22 (19/34)	.114 (2.90)	.136 (3.45)	14.6 (21.7)
24 (19/36)	.102 (2.59)	.124 (3.15)	12.2 (18.2)
26 (19/38)	.092 (2.34)	.114 (2.90)	9.93 (14.8)
28 (7/36)	.082 (2.08)	.104 (2.64)	8.39 (12.5)

Dimensions and Weight—3 Conductor Cables*

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
8 (133/29)	.462 (11.7)	.498 (12.7)	248 (369)
10 (37/26)	.319 (8.10)	.356 (9.04)	138 (205)
12 (19/25)	.255 (6.47)	.280 (7.10)	90.9 (135)
14 (19/27)	.210 (5.32)	.234 (5.93)	61.7 (91.8)
16 (19/29)	.177 (4.50)	.201 (5.11)	43.7 (65.0)
18 (19/30)	.162 (4.12)	.186 (4.73)	37.0 (55.1)
20 (19/32)	.141 (3.57)	.163 (4.14)	26.2 (39.0)
22 (19/34)	.121 (3.08)	.143 (3.63)	19.3 (28.7)
24 (19/36)	.108 (2.75)	.132 (3.36)	15.5 (23.1)
26 (19/38)	.098 (2.48)	.122 (3.09)	12.9 (19.2)
28 (7/36)	.087 (2.21)	.109 (2.77)	10.2 (15.2)

Dimensions and Weight—4 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
8 (133/29)	.515 (13.1)	.551 (14.0)	340 (506)
10 (37/26)	.355 (9.02)	.391 (9.93)	179 (266)
12 (19/25)	.288 (7.30)	.324 (8.22)	120 (179)
14 (19/27)	.233 (5.92)	.257 (6.53)	78.6 (117)
16 (19/29)	.197 (5.00)	.221 (5.61)	52.6 (78.3)
18 (19/30)	.180 (4.57)	.204 (5.18)	46.5 (69.2)
20 (19/32)	.156 (3.96)	.184 (4.67)	34.4 (51.2)
22 (19/34)	.134 (3.41)	.156 (3.96)	23.9 (35.6)
24 (19/36)	.120 (3.04)	.142 (3.61)	19.0 (28.3)
26 (19/38)	.108 (2.73)	.130 (3.30)	15.4 (22.9)
28 (7/36)	.096 (2.43)	.118 (3.00)	12.3 (18.3)

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). All values are nominal. *Using factors from a circumscribed circle per M27500.

M27500 Cables—types TE and TF (M22759/16, /17 components)

M27500 TE and TF cables are shielded and jacketed cables with extruded ETFE (Ethylene Tetrafluoroethylene) jackets, incorporating MIL-W-22759/16 or /17 wires.

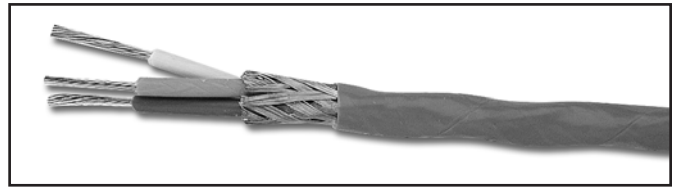
These component wires are insulated with extruded ETFE, and have either tin-plated copper or silver-plated high-strength copper alloy conductors.

Performance:

Voltage rating: 600V.

Temperature rating: -55 to 150° C.

See page 41 for component wire dimensions.



Construction Details

Component wire conductor:

/16 component wires: Tin-plated copper;

/17 component wires: Silver-plated high-strength copper alloy.

Component wire insulation: Extruded ETFE.

Shield: Tin-plated copper braid, 85% coverage.

Jacket: Extruded ETFE.

Colors: Color coded to M27500 (see page 67).

Certifications also available to NEMA WC27500.

Part Numbers:

M27500 - 8 TE 1 T 14

Component wire AWG—**8**
 Component wire type—**TE**: MIL-W-22759/16
TF: MIL-W-22759/17
 Shield material—**T**: Tin-plated copper
 Jacket material—**14**: Extruded white ETFE
15: Extruded clear ETFE
 Number of component wires—**14**

Dimensions and Weight—1 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
8 (133/29)	.217 (5.51)	.245 (6.22)	77.8 (116)
10 (37/26)	.155 (3.94)	.178 (4.52)	44.6 (66.4)
12 (37/28)	.130 (3.30)	.152 (3.86)	30.4 (45.2)
14 (19/27)	.109 (2.77)	.131 (3.33)	21.8 (32.4)
16 (19/29)	.095 (2.41)	.116 (2.95)	15.9 (23.7)
18 (19/30)	.087 (2.21)	.107 (2.72)	13.6 (20.2)
20 (19/32)	.076 (1.93)	.096 (2.44)	10.0 (14.9)
22 (19/34)	.068 (1.73)	.088 (2.20)	8.25 (12.3)
24 (19/36)	.061 (1.55)	.081 (2.06)	7.08 (10.5)

Dimensions and Weight—2 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
8 (133/29)	.426 (10.8)	.462 (11.7)	159 (296)
10 (37/26)	.298 (7.57)	.334 (8.48)	92.1 (166)
12 (37/28)	.244 (6.20)	.268 (6.81)	60.3 (118)
14 (19/27)	.202 (5.13)	.226 (5.74)	42.6 (87.2)
16 (19/29)	.174 (4.42)	.198 (5.03)	31.1 (68.6)
18 (19/30)	.158 (4.01)	.182 (4.62)	26.1 (58.0)
20 (19/32)	.136 (3.45)	.156 (3.96)	18.9 (46.9)
22 (19/34)	.120 (3.05)	.140 (3.56)	14.6 (38.2)
24 (19/36)	.106 (2.69)	.126 (3.20)	11.4 (30.6)

Dimensions and Weight—3 Conductor Cables*

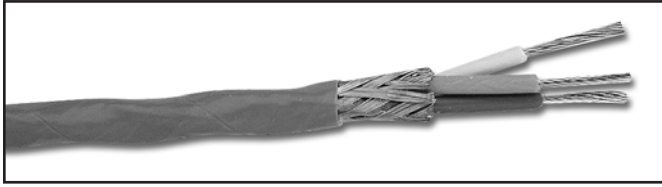
Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
8 (133/29)	.456 (11.6)	.492 (12.5)	230 (342)
10 (37/26)	.319 (8.10)	.354 (8.99)	133 (198)
12 (37/28)	.261 (6.63)	.290 (7.37)	85.5 (127)
14 (19/27)	.216 (5.49)	.244 (6.20)	59.6 (88.7)
16 (19/29)	.186 (4.72)	.214 (5.44)	42.7 (63.5)
18 (19/30)	.169 (4.28)	.197 (5.00)	35.6 (53.0)
20 (19/32)	.145 (3.68)	.167 (4.24)	24.8 (36.9)
22 (19/34)	.128 (3.25)	.150 (3.81)	19.3 (28.7)
24 (19/36)	.113 (2.86)	.135 (3.43)	14.9 (22.2)

Dimensions and Weight—4 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
8 (133/29)	.508 (12.9)	.544 (13.8)	308 (458)
10 (37/26)	.355 (9.02)	.392 (9.96)	172 (256)
12 (37/28)	.295 (7.49)	.331 (8.40)	114 (170)
14 (19/27)	.240 (6.10)	.264 (6.71)	76.1 (113)
16 (19/29)	.206 (5.24)	.230 (5.85)	54.2 (80.7)
18 (19/30)	.187 (4.75)	.211 (5.36)	45.0 (67.0)
20 (19/32)	.161 (4.08)	.185 (4.69)	32.4 (48.2)
22 (19/34)	.141 (3.59)	.165 (4.20)	24.5 (36.5)
24 (19/36)	.124 (3.16)	.148 (3.77)	19.4 (28.9)

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). All values are nominal. *Using factors from a circumscribed circle per M27500.

M27500 Cables—types TG and TH (M22759/18, /19 components)



Construction Details

Component wire conductor:

/18 component wires: Tin-plated copper;
/19 component wires: Silver-plated high-strength copper alloy.

Component wire insulation: Thin-wall extruded ETFE.

Shield: Tin-plated copper braid, 85% coverage.

Jacket: Extruded ETFE.

Colors: Color coded to M27500 (see page 67).

Certifications also available to NEMA WC27500.

M27500 TG and TH cables are shielded and jacketed cables with extruded ETFE (Ethylene Tetrafluoroethylene) jackets, incorporating MIL-W-22759/18 or /19 wires.

These component wires are insulated with thin-wall extruded ETFE for weight and space savings, and have either tin-plated copper or silver-plated high-strength copper alloy conductors.

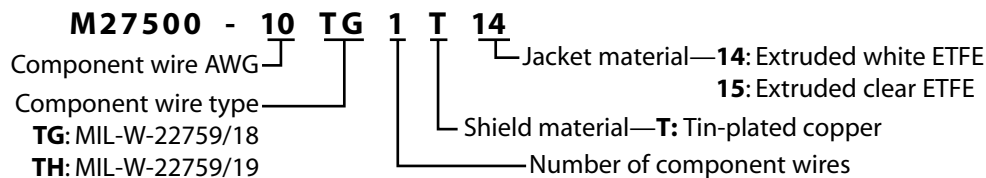
Performance:

Voltage rating: 600V.

Temperature rating: -55 to 150° C.

See page 42 for component wire dimensions.

Part Numbers:



Dimensions and Weight—1 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.150 (3.81)	.172 (4.37)	43.5 (64.7)
12 (37/28)	.123 (3.12)	.143 (3.63)	29.8 (44.3)
14 (19/27)	.101 (2.57)	.121 (3.07)	20.8 (31.0)
16 (19/29)	.086 (2.18)	.106 (2.69)	14.9 (22.2)
18 (19/30)	.077 (1.96)	.097 (2.46)	11.9 (17.7)
20 (19/32)	.067 (1.70)	.087 (2.21)	9.21 (13.7)
22 (19/34)	.059 (1.50)	.079 (2.01)	6.76 (10.1)
24 (19/36)	.052 (1.32)	.072 (1.83)	5.66 (8.42)
26 (19/38)	.048 (1.22)	.068 (1.73)	5.21 (7.75)

Dimensions and Weight—2 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.288 (7.32)	.313 (7.95)	91.3 (136)
12 (37/28)	.230 (5.84)	.255 (6.48)	58.8 (87.5)
14 (19/27)	.186 (4.72)	.211 (5.36)	39.8 (59.2)
16 (19/29)	.156 (3.96)	.181 (4.60)	28.2 (42.0)
18 (19/30)	.138 (3.51)	.160 (4.06)	23.1 (34.4)
20 (19/32)	.118 (3.00)	.140 (3.56)	17.5 (26.0)
22 (19/34)	.102 (2.59)	.124 (3.15)	12.4 (18.5)
24 (19/36)	.088 (2.24)	.110 (2.79)	9.29 (13.8)
26 (19/38)	.080 (2.03)	.102 (2.59)	8.05 (12.0)

Dimensions and Weight—3 Conductor Cables*

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.308 (7.83)	.345 (8.76)	129 (192)
12 (37/28)	.246 (6.25)	.275 (6.99)	83.1 (124)
14 (19/27)	.199 (5.05)	.227 (5.77)	55.7 (82.9)
16 (19/29)	.167 (4.25)	.195 (4.95)	39.4 (58.6)
18 (19/30)	.147 (3.74)	.169 (4.29)	30.9 (46.0)
20 (19/32)	.126 (3.19)	.148 (3.76)	22.2 (33.0)
22 (19/34)	.108 (2.75)	.130 (3.30)	16.5 (24.6)
24 (19/36)	.093 (2.37)	.115 (2.92)	12.3 (18.3)
26 (19/38)	.085 (2.15)	.107 (2.72)	9.84 (14.6)

Dimensions and Weight—4 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.343 (8.71)	.382 (9.70)	169 (252)
12 (37/28)	.278 (7.06)	.304 (7.72)	111 (165)
14 (19/27)	.221 (5.61)	.246 (6.24)	71.6 (107)
16 (19/29)	.185 (4.69)	.213 (5.41)	49.3 (73.4)
18 (19/30)	.163 (4.14)	.191 (4.85)	39.9 (59.4)
20 (19/32)	.139 (3.53)	.161 (4.09)	27.2 (40.5)
22 (19/34)	.120 (3.04)	.142 (3.61)	19.8 (29.5)
24 (19/36)	.103 (2.61)	.125 (3.18)	15.3 (22.8)
26 (19/38)	.093 (2.37)	.115 (2.92)	12.1 (18.0)

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). All values are nominal. *Using factors from a circumscribed circle per M27500.

M27500 Cables—type WB (M22759/80 components)

M27500 WB cables are shielded and jacketed cables with a jacket of FEP/polyimide tape covered by a PTFE tape outer layer, incorporating MIL-DTL-22759/80 wires.

These component wires have a light-weight composite insulation of PTFE/polyimide/PTFE tape, covered with PTFE tape, and tin-plated copper conductors.

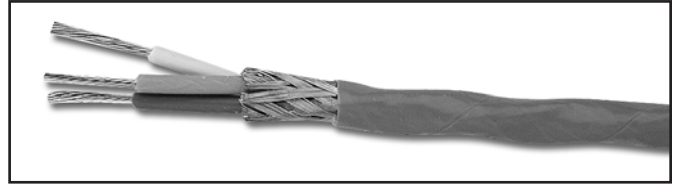
These cables can be supplied with **Seamless Wrap** PTFE tape component wire insulation and jacket (see page 87 for details and part numbers).

Performance:

Voltage rating: 600V.

Temperature rating: -55 to 150° C.

See page 47 for component wire dimensions.



Construction Details

Component wire conductor: Tin-plated copper.

Component wire insulation:

Inner layer: PTFE/polyimide/PTFE tape;
Outer layer: PTFE tape.

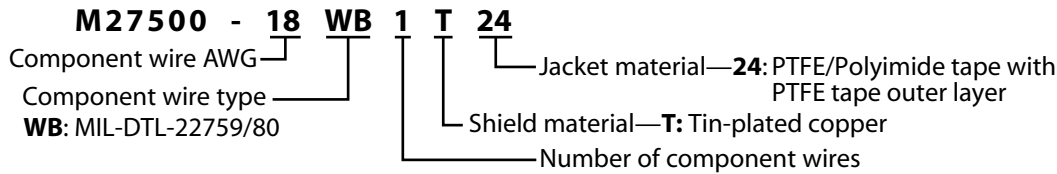
Shield: Tin-plated copper braid, 85% coverage.

Jacket: Inner layer: FEP/polyimide tape;
Outer layer: PTFE tape.

Colors: Color coded to M27500 (see page 67).

Certifications also available to NEMA WC27500.

Part Numbers:



Dimensions and Weight—1 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.137 (3.48)	.146 (3.70)	48.4 (57.1)
12 (37/28)	.114 (2.90)	.123 (3.12)	26.32(39.0)
14 (19/27)	.094 (2.39)	.103 (2.61)	18.0 (26.8)
16 (19/29)	.081 (2.06)	.090 (2.28)	13.0 (19.4)
18 (19/30)	.074 (1.88)	.083 (2.10)	11.1 (16.5)
20 (19/32)	.066 (1.68)	.075 (1.90)	8.17 (12.2)
22 (19/34)	.058 (1.47)	.067 (1.69)	6.17 (9.18)
24 (19/36)	.052 (1.32)	.061 (1.54)	5.07 (7.54)
26 (19/38)	.048 (1.22)	.057 (1.44)	4.62 (6.88)

Dimensions and Weight—2 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.262 (6.65)	.271 (6.87)	74.7 (111)
12 (37/28)	.212 (5.38)	.221 (5.60)	50.2 (74.7)
14 (19/27)	.172 (4.37)	.181 (4.59)	34.2 (50.9)
16 (19/29)	.146 (3.71)	.155 (3.93)	24.3 (36.1)
18 (19/30)	.132 (3.35)	.141 (3.57)	20.3 (30.1)
20 (19/32)	.116 (2.95)	.125 (3.17)	14.8 (22.1)
22 (19/34)	.100 (2.54)	.109 (2.76)	10.8 (16.1)
24 (19/36)	.088 (2.24)	.097 (2.45)	8.24 (12.3)
26 (19/38)	.080 (2.03)	.089 (2.25)	6.67 (9.93)

Dimensions and Weight—3 Conductor Cables*

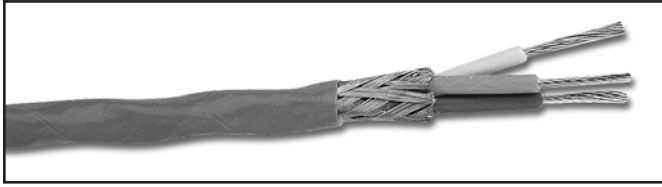
Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.280 (7.12)	.289 (7.34)	110 (164)
12 (37/28)	.227 (5.76)	.235 (5.98)	71.4 (106)
14 (19/27)	.184 (4.67)	.192 (4.89)	47.9 (71.3)
16 (19/29)	.156 (3.96)	.164 (4.18)	33.9 (50.4)
18 (19/30)	.141 (3.57)	.149 (3.79)	27.9 (41.6)
20 (19/32)	.124 (3.14)	.132 (3.36)	20.1 (30.0)
22 (19/34)	.106 (2.70)	.115 (2.92)	14.5 (21.5)
24 (19/36)	.093 (2.37)	.102 (2.59)	10.5 (15.6)
26 (19/38)	.085 (2.15)	.093 (2.37)	8.76 (13.0)

Dimensions and Weight—4 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.312 (7.9)	.324 (8.23)	143 (213)
12 (37/28)	.256 (6.5)	.265 (6.73)	93.1 (138)
14 (19/27)	.204 (5.2)	.213 (5.40)	61.8 (92.0)
16 (19/29)	.173 (4.4)	.181 (4.60)	43.4 (64.6)
18 (19/30)	.156 (4.0)	.164 (4.18)	35.5 (52.9)
20 (19/32)	.137 (3.5)	.145 (3.69)	25.6 (38.0)
22 (19/34)	.117 (3.0)	.126 (3.20)	18.1 (27.0)
24 (19/36)	.103 (2.6)	.111 (2.83)	13.1 (19.4)
26 (19/38)	.093 (2.4)	.102 (2.58)	10.6 (15.7)

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). All values are nominal. *Using factors from a circumscribed circle per M27500.

M27500 Cables—types WC and WE (M22759/81, /82 components)



Construction Details

Component wire conductor:

/81 component wires: Silver-plated high-strength copper alloy;

/82 component wires: Nickel-plated high-strength copper alloy.

Component wire insulation:

Inner layer: PTFE/polyimide/PTFE tape;

Outer layer: PTFE tape.

Shield: Nickel-plated copper braid, 85% coverage.

Jacket: Inner layer: FEP/polyimide tape;

Outer layer: PTFE tape.

Colors: Color coded to M27500 (see page 67).

Certifications also available to NEMA WC27500.

M27500 WC and WE cables are shielded and jacketed cables with a jacket of FEP/polyimide tape covered by a PTFE tape outer layer, incorporating MIL-DTL-22759/81 or /82 wires.

These component wires have a light-weight composite insulation of PTFE/polyimide/PTFE tape, covered with PTFE tape, and silver- or nickel-plated high-strength copper alloy conductors.

These cables can be supplied with **Seamless Wrap** PTFE tape component wire insulation and jacket (see page 87 for details and part numbers).

Performance:

Voltage rating: 600V.

Temperature rating: -55 to 200° C.

See page 47 for component wire dimensions.

Part Numbers:

M27500 - 22 WE 1 N 24

Component wire AWG—

Component wire type

WC: MIL-DTL-22759/81

WE: MIL-DTL-22759/82

Jacket material—**24:** PTFE/Polyimide tape with PTFE tape outer layer

Shield material—**N:** Nickel-plated copper

Number of component wires

Dimensions and Weight—1 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
20 (19/32)	.066 (1.68)	.075 (1.90)	8.17 (12.2)
22 (19/34)	.058 (1.47)	.067 (1.69)	6.17 (9.18)
24 (19/36)	.052 (1.32)	.061 (1.54)	5.07 (7.54)
26 (19/38)	.048 (1.22)	.057 (1.44)	4.62 (6.88)

Dimensions and Weight—2 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
20 (19/32)	.116 (2.95)	.125 (3.17)	14.8 (22.1)
22 (19/34)	.100 (2.54)	.109 (2.76)	10.8 (16.1)
24 (19/36)	.088 (2.24)	.097 (2.45)	8.24 (12.3)
26 (19/38)	.080 (2.03)	.089 (2.25)	6.67 (9.93)

Dimensions and Weight—3 Conductor Cables*

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
20 (19/32)	.124 (3.14)	.132 (3.36)	20.1 (30.0)
22 (19/34)	.106 (2.70)	.115 (2.92)	14.5 (21.5)
24 (19/36)	.093 (2.37)	.102 (2.59)	10.5 (15.6)
26 (19/38)	.085 (2.15)	.093 (2.37)	8.76 (13.0)

Dimensions and Weight—4 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
20 (19/32)	.137 (3.5)	.145 (3.69)	25.6 (38.0)
22 (19/34)	.117 (3.0)	.126 (3.20)	18.1 (27.0)
24 (19/36)	.103 (2.6)	.111 (2.83)	13.1 (19.4)
26 (19/38)	.093 (2.4)	.102 (2.58)	10.6 (15.7)

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). All values are nominal. *Using factors from a circumscribed circle per M27500.

M27500 Cables—types WJ, WK, and WL (M22759/86, /87, /88 components)

M27500 WJ, WK, and WL cables are shielded and jacketed cables with a jacket of FEP/polyimide tape covered by a PTFE tape outer layer, incorporating MIL-DTL-22759/86, /87, or /88 wires. These component wires have a light-weight composite insulation of PTFE/polyimide/PTFE tape, covered with PTFE tape, and silver, nickel, or tin-plated copper conductors.

These cables can be supplied with **Seamless Wrap** PTFE tape component wire insulation and jacket (see page 87 for details and part numbers).

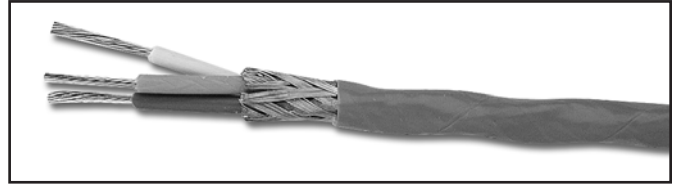
Performance:

Voltage rating: 600V.

Temperature rating:

Cables with /86 component wires: -55 to 200° C.
 Cables with /87 component wires: -55 to 260° C.
 Cables with /88 component wires: -55 to 150° C.

See pages 45–47 for component wire dimensions.



Construction Details

Component wire conductor:

/86 component wires: Silver-plated copper;
 /87 component wires: Nickel-plated copper;
 /88 component wires: Tin-plated copper.

Component wire insulation:

Inner layer: PTFE/polyimide/PTFE tape;
 Outer layer: PTFE tape.

Shield: Nickel- or silver-plated copper braid, 85% coverage.

Jacket: Inner layer: FEP/polyimide tape;
 Outer layer: PTFE tape.

Colors: Color coded to M27500 (see page 67).

Certifications also available to NEMA WC27500.

Part Numbers:

M27500 - 18 WK 1 N 24

Component wire AWG—18
 Component wire type—WK
 WJ: MIL-DTL-22759/86
 WK: MIL-DTL-22759/87
 WL: MIL-DTL-22759/88

Jacket material—24: PTFE/Polyimide tape with PTFE tape outer layer
 Shield material—N: Nickel-plated copper
 S: Silver-plated copper
 Number of component wires—1

Dimensions and Weight—1 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.137 (3.48)	.146 (3.70)	48.4 (57.1)
12 (37/28)	.114 (2.90)	.123 (3.12)	26.32(39.0)
14 (19/27)	.094 (2.39)	.103 (2.61)	18.0 (26.8)
16 (19/29)	.081 (2.06)	.090 (2.28)	13.0 (19.4)
18 (19/30)	.074 (1.88)	.083 (2.10)	11.1 (16.5)
20 (19/32)	.066 (1.68)	.075 (1.90)	8.17 (12.2)
22 (19/34)	.058 (1.47)	.067 (1.69)	6.17 (9.18)
24 (19/36)	.052 (1.32)	.061 (1.54)	5.07 (7.54)
26 (19/38)	.048 (1.22)	.057 (1.44)	4.62 (6.88)

Dimensions and Weight—2 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.262 (6.65)	.271 (6.87)	74.7 (111)
12 (37/28)	.212 (5.38)	.221 (5.60)	50.2 (74.7)
14 (19/27)	.172 (4.37)	.181 (4.59)	34.2 (50.9)
16 (19/29)	.146 (3.71)	.155 (3.93)	24.3 (36.1)
18 (19/30)	.132 (3.35)	.141 (3.57)	20.3 (30.1)
20 (19/32)	.116 (2.95)	.125 (3.17)	14.8 (22.1)
22 (19/34)	.100 (2.54)	.109 (2.76)	10.8 (16.1)
24 (19/36)	.088 (2.24)	.097 (2.45)	8.24 (12.3)
26 (19/38)	.080 (2.03)	.089 (2.25)	6.67 (9.93)

Dimensions and Weight—3 Conductor Cables*

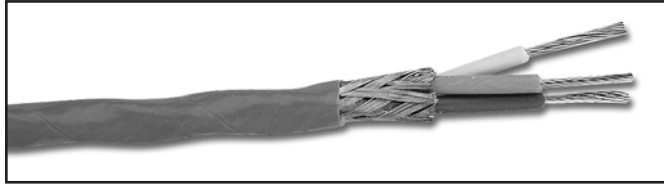
Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.280 (7.12)	.289 (7.34)	110 (164)
12 (37/28)	.227 (5.76)	.235 (5.98)	71.4 (106)
14 (19/27)	.184 (4.67)	.192 (4.89)	47.9 (71.3)
16 (19/29)	.156 (3.96)	.164 (4.18)	33.9 (50.4)
18 (19/30)	.141 (3.57)	.149 (3.79)	27.9 (41.6)
20 (19/32)	.124 (3.14)	.132 (3.36)	20.1 (30.0)
22 (19/34)	.106 (2.70)	.115 (2.92)	14.5 (21.5)
24 (19/36)	.093 (2.37)	.102 (2.59)	10.5 (15.6)
26 (19/38)	.085 (2.15)	.093 (2.37)	8.76 (13.0)

Dimensions and Weight—4 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.312 (7.9)	.324 (8.23)	143 (213)
12 (37/28)	.256 (6.5)	.265 (6.73)	93.1 (138)
14 (19/27)	.204 (5.2)	.213 (5.40)	61.8 (92.0)
16 (19/29)	.173 (4.4)	.181 (4.60)	43.4 (64.6)
18 (19/30)	.156 (4.0)	.164 (4.18)	35.5 (52.9)
20 (19/32)	.137 (3.5)	.145 (3.69)	25.6 (38.0)
22 (19/34)	.117 (3.0)	.126 (3.20)	18.1 (27.0)
24 (19/36)	.103 (2.6)	.111 (2.83)	13.1 (19.4)
26 (19/38)	.093 (2.4)	.102 (2.58)	10.6 (15.7)

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). All values are nominal. *Using factors from a circumscribed circle per M27500.

M27500 Cables—types WM and WN (M22759/89, /90 components)



Construction Details

Component wire conductor:

/89 component wires: Silver-plated high-strength copper alloy;

/90 component wires: Nickel-plated high-strength copper alloy.

Note: AWG 26 wires with either plating have ultra-high-strength copper alloy conductors.

Component wire insulation:

Inner layer: PTFE/polyimide/PTFE tape;

Outer layer: PTFE tape.

Shield: Nickel- or silver-plated copper braid, 85% coverage.

Jacket: Inner layer: FEP/polyimide tape;
Outer layer: PTFE tape.

Colors: Color coded to M27500 (see page 67).

Certifications also available to NEMA WC27500.

M27500 WM and WN cables are shielded and jacketed cables with a jacket of FEP/polyimide tape covered by a PTFE tape outer layer, incorporating MIL-DTL-22759/89 or /90 wires.

These component wires have a light-weight composite insulation of PTFE/polyimide/PTFE tape, covered with PTFE tape, and silver- or nickel-plated high-strength copper alloy conductors.

These cables can be supplied with **Seamless Wrap** PTFE tape component wire insulation and jacket (see page 87 for details and part numbers).

Performance:

Voltage rating: 600V.

Temperature rating:

Cables with /89 component wires: -55 to 200° C.

Cables with /90 component wires: -55 to 260° C.

See page 52 for component wire dimensions.

Part Numbers:

M27500 - 22 WN 1 N 24

Component wire AWG

Component wire type

WM: MIL-DTL-22759/89

WN: MIL-DTL-22759/90

Jacket material—**24:** PTFE/Polyimide tape with PTFE tape outer layer

Shield material—**N:** Nickel-plated copper
S: Silver-plated copper

Number of component wires

Dimensions and Weight—1 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
20 (19/32)	.066 (1.68)	.075 (1.90)	8.17 (12.2)
22 (19/34)	.058 (1.47)	.067 (1.69)	6.17 (9.18)
24 (19/36)	.052 (1.32)	.061 (1.54)	5.07 (7.54)
26 (19/38)	.048 (1.22)	.057 (1.44)	4.62 (6.88)

Dimensions and Weight—2 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
20 (19/32)	.116 (2.95)	.125 (3.17)	14.8 (22.1)
22 (19/34)	.100 (2.54)	.109 (2.76)	10.8 (16.1)
24 (19/36)	.088 (2.24)	.097 (2.45)	8.24 (12.3)
26 (19/38)	.080 (2.03)	.089 (2.25)	6.67 (9.93)

Dimensions and Weight—3 Conductor Cables*

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
20 (19/32)	.124 (3.14)	.132 (3.36)	20.1 (30.0)
22 (19/34)	.106 (2.70)	.115 (2.92)	14.5 (21.5)
24 (19/36)	.093 (2.37)	.102 (2.59)	10.5 (15.6)
26 (19/38)	.085 (2.15)	.093 (2.37)	8.76 (13.0)

Dimensions and Weight—4 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
20 (19/32)	.137 (3.5)	.145 (3.69)	25.6 (38.0)
22 (19/34)	.117 (3.0)	.126 (3.20)	18.1 (27.0)
24 (19/36)	.103 (2.6)	.111 (2.83)	13.1 (19.4)
26 (19/38)	.093 (2.4)	.102 (2.58)	10.6 (15.7)

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). All values are nominal. *Using factors from a circumscribed circle per M27500.

M27500 Cables—types WP and WR (M22759/91, /92 components)

M27500 WP and WR cables are shielded and jacketed cables with a jacket of FEP/polyimide tape covered by a PTFE tape outer layer, incorporating MIL-DTL-22759/91 or /92 wires.

These component wires have a light-weight composite insulation of PTFE/polyimide/PTFE tape, covered with PTFE tape, and silver- or nickel-plated copper conductors.

These cables can be supplied with **Seamless Wrap** PTFE tape component wire insulation and jacket (see page 87 for details and part numbers).

Performance:

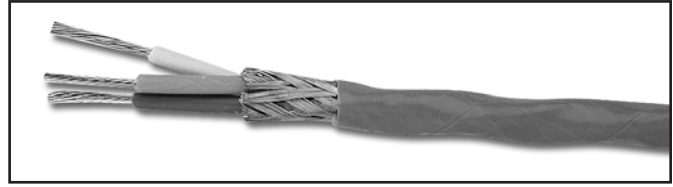
Voltage rating: 600V.

Temperature rating:

Cables with /91 component wires: -55 to 200° C.

Cables with /92 component wires: -55 to 260° C.

See page 53 for component wire dimensions.



Construction Details

Component wire conductor:

/91 component wires: Silver-plated copper;

/92 component wires: Nickel-plated copper.

Component wire insulation:

Inner layer: PTFE/polyimide/PTFE tape;

Outer layer: PTFE tape.

Shield: Nickel- or silver-plated copper braid, 85% coverage.

Jacket: Inner layer: FEP/polyimide tape;

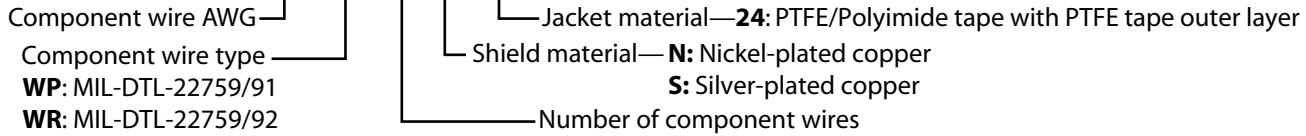
Outer layer: PTFE tape.

Colors: Color coded to M27500 (see page 67).

Certifications also available to NEMA WC27500.

Part Numbers:

M27500 - 18 WR 1 N 24



Dimensions and Weight—1 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.137 (3.48)	.146 (3.70)	48.4 (57.1)
12 (37/28)	.114 (2.90)	.123 (3.12)	26.32(39.0)
14 (19/27)	.094 (2.39)	.103 (2.61)	18.0 (26.8)
16 (19/29)	.081 (2.06)	.090 (2.28)	13.0 (19.4)
18 (19/30)	.074 (1.88)	.083 (2.10)	11.1 (16.5)
20 (19/32)	.066 (1.68)	.075 (1.90)	8.17 (12.2)
22 (19/34)	.058 (1.47)	.067 (1.69)	6.17 (9.18)
24 (19/36)	.052 (1.32)	.061 (1.54)	5.07 (7.54)
26 (19/38)	.048 (1.22)	.057 (1.44)	4.62 (6.88)

Dimensions and Weight—2 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.262 (6.65)	.271 (6.87)	74.7 (111)
12 (37/28)	.212 (5.38)	.221 (5.60)	50.2 (74.7)
14 (19/27)	.172 (4.37)	.181 (4.59)	34.2 (50.9)
16 (19/29)	.146 (3.71)	.155 (3.93)	24.3 (36.1)
18 (19/30)	.132 (3.35)	.141 (3.57)	20.3 (30.1)
20 (19/32)	.116 (2.95)	.125 (3.17)	14.8 (22.1)
22 (19/34)	.100 (2.54)	.109 (2.76)	10.8 (16.1)
24 (19/36)	.088 (2.24)	.097 (2.45)	8.24 (12.3)
26 (19/38)	.080 (2.03)	.089 (2.25)	6.67 (9.93)

Dimensions and Weight—3 Conductor Cables*

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.280 (7.12)	.289 (7.34)	110 (164)
12 (37/28)	.227 (5.76)	.235 (5.98)	71.4 (106)
14 (19/27)	.184 (4.67)	.192 (4.89)	47.9 (71.3)
16 (19/29)	.156 (3.96)	.164 (4.18)	33.9 (50.4)
18 (19/30)	.141 (3.57)	.149 (3.79)	27.9 (41.6)
20 (19/32)	.124 (3.14)	.132 (3.36)	20.1 (30.0)
22 (19/34)	.106 (2.70)	.115 (2.92)	14.5 (21.5)
24 (19/36)	.093 (2.37)	.102 (2.59)	10.5 (15.6)
26 (19/38)	.085 (2.15)	.093 (2.37)	8.76 (13.0)

Dimensions and Weight—4 Conductor Cables

Component Wire AWG (Stranding)	Shield Diameter	Jacket Diameter	Weight
10 (37/26)	.312 (7.9)	.324 (8.23)	143 (213)
12 (37/28)	.256 (6.5)	.265 (6.73)	93.1 (138)
14 (19/27)	.204 (5.2)	.213 (5.40)	61.8 (92.0)
16 (19/29)	.173 (4.4)	.181 (4.60)	43.4 (64.6)
18 (19/30)	.156 (4.0)	.164 (4.18)	35.5 (52.9)
20 (19/32)	.137 (3.5)	.145 (3.69)	25.6 (38.0)
22 (19/34)	.117 (3.0)	.126 (3.20)	18.1 (27.0)
24 (19/36)	.103 (2.6)	.111 (2.83)	13.1 (19.4)
26 (19/38)	.093 (2.4)	.102 (2.58)	10.6 (15.7)

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). All values are nominal. *Using factors from a circumscribed circle per M27500.