

SEALPIC® - FSF (RDUP PE-89)



Product Description

SEALPIC®-FSF cables are designed for direct burial or duct applications where protection from moisture is required and aluminum shielding is desired. SEALPIC®-FSF may be used aerially, but must be attached to a support strand.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22, 24 and 26 AWG.
- **INSULATION:** Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin. The conductor insulation is color coded in accordance with industry standards.
- **TWISTED PAIRS:** Individual insulated conductors are twisted into pairs with varying lay lengths to minimize crosstalk and specific color combinations to provide pair identification.
- **CORE ASSEMBLY:** Cables of 25 pairs or less are assembled into a cylindrical core. Cables larger than 25 pairs are assembled into units, which are then used to assemble the core. Units are individually identifiable by color coded unit binders.
- **FILLING COMPOUND:** The core assembly is filled with an 80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap.
- **CORE WRAP:** A non-hygroscopic, dielectric tape is applied over the core assembly to provide thermal protection for the core.
- **SHIELDING:** A corrugated, copolymer coated, 8-mil aluminum tape is applied longitudinally with an overlap. The shield interfaces are flooded.
- **JACKET:** A black, linear low-density polyethylene jacket is applied overall. The jacket provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations.
- **JACKET MARKINGS:** Information such as manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

| Total Number of Pairs | nF/mile | nF/km |
|-----------------------|---------|--------|
| 12 or less | 83 ± 7 | 52 ± 4 |
| Over 12 | 83 ± 4 | 52 ± 2 |

| Conductor Size | | Minimum Insulation Resistance 68° F (20° C) | | Max Average Attenuation 772kHz @ 68° F (20° C) | | Max Conductor Resistance @ 68° F (20° C) Ohms/sheath | | Resistance Unbalance Maximum % | | Dielectric Strength DC Potential – Volts | |
|----------------|------|--|-----------|---|-------|--|-------|-----------------------------------|-----------------|---|---------------|
| AWG | mm | gigohm-mile | gigohm-km | dB/kft | dB/km | mile | km | Avg. | Individual Pair | Cdr. to Cdr. | Cdr. to Grnd. |
| 19 | 0.90 | 1.0 | 1.6 | 3.2 | 10.5 | 45.0 | 28.0 | 1.5 | 5.0 | 4,500 | 10,000 |
| 22 | 0.64 | 1.0 | 1.6 | 4.5 | 14.8 | 91.0 | 56.6 | 1.5 | 5.0 | 3,600 | 10,000 |
| 24 | 0.50 | 1.0 | 1.6 | 5.6 | 18.4 | 144.0 | 89.5 | 1.5 | 5.0 | 3,000 | 10,000 |
| 26 | 0.40 | 1.0 | 1.6 | 7.0 | 23.3 | 232.0 | 144.0 | 1.5 | 5.0 | 2,400 | 10,000 |

| Minimum Near End Crosstalk (NEXT) at | 150 kHz | | 772 kHz | |
|--------------------------------------|---------|----|---------|----|
| P.S.WUNEXT mean (dB) | 58 | | 47 | |
| P.S.WUNEXT worst pair (dB) | 53 | | 42 | |
| Minimum Far End Crosstalk at 150 kHz | | | | |
| Conductor size (AWG) | 19 | 22 | 24 | 26 |
| P.S. ELFEXT mean (dB/kft) | 65 | 63 | 63 | 61 |
| P.S. ELFEXT worst pair (dB/kft) | 59 | 57 | 57 | 57 |
| Minimum Far End Crosstalk at 772 kHz | | | | |
| Conductor size (AWG) | 19 | 22 | 24 | 26 |
| P.S. ELFEXT mean (dB/kft) | 51 | 49 | 49 | 47 |
| P.S. ELFEXT worst pair (dB/kft) | 45 | 43 | 43 | 43 |

| Capacitance Unbalance Pair to Pair @ 1 kHz | Maximum Individual | | Maximum RMS | |
|---|--------------------|-------|-------------|-------|
| Pairs | pF/kft | pF/km | pF/kft | pF/km |
| 12 or less | 80 | 145 | - | - |
| more than 12 | 80 | 145 | 25 | 45 |

| Capacitance Unbalance Pair to Ground @ 1 kHz | Maximum Individual | | Maximum Avg | |
|---|--------------------|-------|-------------|-------|
| Pairs | pF/kft | pF/km | pF/kft | pF/km |
| 12 or less | 800 | 2625 | - | - |
| more than 12 | 800 | 2625 | 175 | 574 |

*For cables of 12 pairs or less, the maximum average attenuation may be increased by 10% over the values shown.

| Part Numbers and Physical Characteristics | | | | | | | |
|---|----------------------------|------------|-----------------------|--------------------------------|------------------------|----------------------------------|---------------------|
| | Part # | Pair Count | Nom. O.D. inches (mm) | Approx. Weight lbs/kft (kg/km) | Standard Length ft (m) | Approx. Shipping Weight lbs (kg) | Reel Size FtxD (in) |
| 19 AWG (0.90 mm) | 09-026-02 | 6 | 0.49 (12) | 120 (180) | 5000 (1524) | 710 (320) | 44 x 18 x 20 |
| | 09-028-02 | 12 | 0.59 (15) | 190 (285) | 5000 (1524) | 1115 (505) | 46 x 25 x 20 |
| | 09-031-02 | 25 | 0.78 (20) | 355 (530) | 5000 (1524) | 1980 (895) | 52 x 25 x 20 |
| | 09-034-02 | 50 | 1.03 (26) | 655 (975) | 5000 (1524) | 3565 (1615) | 62 x 30 x 24 |
| | 09-038-02 | 100 | 1.37 (35) | 1225 (1825) | 2500 (762) | 3430 (1555) | 65 x 30 x 32 |
| 22 AWG (0.64 mm) | 09-057-02 | 6 | 0.39 (9.9) | 70 (105) | 5000 (1524) | 415 (190) | 36 x 18 x 14 |
| | 09-059-02 | 12 | 0.47 (12) | 115 (170) | 5000 (1524) | 685 (310) | 44 x 18 x 20 |
| | 09-062-02 | 25 | 0.60 (15) | 200 (300) | 5000 (1524) | 1165 (530) | 46 x 25 x 20 |
| | 09-065-02 | 50 | 0.77 (20) | 350 (520) | 5000 (1524) | 1955 (885) | 52 x 25 x 20 |
| | 09-069-02 | 100 | 1.02 (26) | 650 (965) | 5000 (1524) | 3540 (1605) | 62 x 30 x 24 |
| | 09-073-02 | 200 | 1.38 (35) | 1225 (1825) | 2500 (762) | 3350 (1520) | 62 x 30 x 24 |
| | 09-075-02 | 300 | 1.65 (42) | 1800 (2680) | 1250 (381) | 2495 (1130) | 58 x 25 x 20 |
| | 09-077-02 | 400 | 1.88 (48) | 2365 (3520) | 1250 (381) | 3245 (1470) | 62 x 30 x 24 |
| | 09-081-02 | 600 | 2.28 (58) | 3505 (5215) | 1250 (381) | 4995 (2265) | 72 x 35 x 36 |
| | 09-083-02 | 900 | 2.76 (70) | 5195 (7730) | 1250 (381) | 7290 (3305) | 84 x 40 x 42 |
| | 09-085-02 | 1200 | 3.14 (80) | 6845 (10185) | 1250 (381) | 9730 (4415) | 96 x 40 x 48 |
| | 09-087-02 | 1500 | 3.51 (89) | 8520 (12680) | 1000 (305) | 9695 (4400) | 96 x 40 x 48 |
| | 24 AWG (0.50 mm) | 09-092-02 | 6 | 0.36 (9.1) | 55 (80) | 5000 (1524) | 320 (145) |
| 09-094-02 | | 12 | 0.42 (11) | 85 (125) | 5000 (1524) | 490 (220) | 36 x 18 x 14 |
| 09-097-02 | | 25 | 0.52 (13) | 140 (210) | 5000 (1524) | 810 (365) | 44 x 18 x 20 |
| 09-100-02 | | 50 | 0.66 (17) | 240 (355) | 5000 (1524) | 1365 (620) | 46 x 25 x 20 |
| 09-104-02 | | 100 | 0.85 (22) | 430 (640) | 5000 (1524) | 2395 (1085) | 58 x 25 x 20 |
| 09-108-02 | | 200 | 1.14 (29) | 810 (1205) | 5000 (1524) | 4665 (2115) | 72 x 35 x 36 |
| 09-110-02 | | 300 | 1.37 (35) | 1180 (1755) | 2500 (762) | 3320 (1505) | 65 x 30 x 32 |
| 09-112-02 | | 400 | 1.55 (39) | 1545 (2300) | 2500 (762) | 4475 (2030) | 72 x 35 x 36 |
| 09-116-02 | | 600 | 1.88 (48) | 2285 (3400) | 1250 (381) | 3145 (1425) | 62 x 30 x 24 |
| 09-118-02 | | 900 | 2.25 (57) | 3350 (4985) | 1250 (381) | 4800 (2180) | 72 x 35 x 36 |
| 09-120-02 | | 1200 | 2.57 (65) | 4420 (6580) | 1250 (381) | 6225 (2825) | 78 x 40 x 39 |
| 09-121-02 | | 1500 | 2.86 (73) | 5490 (8170) | 1000 (305) | 6190 (2805) | 78 x 40 x 39 |
| 09-124-02 | | 1800 | 3.12 (79) | 6560 (9765) | 1000 (305) | 7355 (3335) | 84 x 40 x 42 |
| 09-125-02 | | 2100 | 3.40 (86) | 7690 (11445) | 1000 (305) | 8865 (4020) | 96 x 40 x 48 |
| 09-126-02 | | 2400 | 3.59 (91) | 8695 (12940) | 1000 (305) | 9870 (4475) | 96 x 40 x 48 |
| 26 AWG (0.40 mm) | 09-132-02 | 25 | 0.44 (11) | 100 (150) | 5000 (1524) | 565 (255) | 36 x 18 x 14 |
| | 09-135-02 | 50 | 0.55 (14) | 165 (245) | 5000 (1524) | 990 (450) | 46 x 25 x 20 |
| | 09-139-02 | 100 | 0.71 (18) | 290 (430) | 5000 (1524) | 1655 (750) | 52 x 25 x 20 |
| | 09-143-02 | 200 | 0.94 (24) | 535 (795) | 5000 (1524) | 2965 (1345) | 62 x 30 x 24 |
| | 09-145-02 | 300 | 1.09 (28) | 755 (1125) | 5000 (1524) | 4390 (1990) | 72 x 35 x 36 |
| | 09-147-02 | 400 | 1.25 (32) | 995 (1480) | 2500 (762) | 2735 (1240) | 58 x 25 x 20 |
| | 09-151-02 | 600 | 1.49 (38) | 1455 (2165) | 2500 (762) | 4250 (1930) | 72 x 35 x 36 |
| | 09-153-02 | 900 | 1.78 (45) | 2120 (3155) | 1250 (381) | 3020 (1370) | 65 x 30 x 32 |
| | 09-155-02 | 1200 | 2.03 (52) | 2785 (4145) | 1250 (381) | 4095 (1860) | 72 x 35 x 36 |
| | 09-156-02 | 1500 | 2.28 (58) | 3480 (5180) | 1250 (381) | 4965 (2250) | 72 x 35 x 36 |
| | 09-157-02 | 1800 | 2.48 (63) | 4150 (6175) | 1250 (381) | 5885 (2670) | 78 x 40 x 39 |
| | 09-159-02 | 2400 | 2.86 (73) | 5515 (8210) | 1250 (381) | 8070 (3660) | 96 x 40 x 48 |
| | 09-164-02 | 3600 | 3.45 (88) | 8165 (12150) | 1000 (305) | 9340 (4235) | 96 x 40 x 48 |

RDUP OSP COPPER CABLE

Standards Compliance:
ANSI/ICEA S-84-608-2002; RDUP 7 CFR 1755.890 (PE-89), RoHS compliant