

# SOLO® ADSS Short-Span, Loose Tube, Gel-Filled Cable 24 F, 62.5 µm multimode (OM1)

CORNING

## Part Number: 024KN4-T4S30A20

Corning SOLO® ADSS short-span cables are all-dielectric, self-supporting (ADSS) cables designed for easy and economical one-step installation in campus backbones with self-supporting installations where metallic messengers cannot be used. The loose tube design provides stable performance over a wide temperature range and is compatible with any telecommunications-grade optical fiber. The economical single-jacket design can span distances up to 600 ft in NESC light conditions, 500 ft in NESC medium conditions and 300 ft in NESC heavy conditions (see sag and tension chart for details). This cable incorporates innovative waterblocking materials, eliminating the need for traditional flooding compound and providing efficient and craft-friendly cable preparation. While the concentric, self-supporting cable design allows easy, one-step installation using standard hardware and installation methods, the SZ-stranded, loose tube design isolates optical fibers from installation and environmental rigors and facilitates mid-span access. The ADSS optical cables are also available with a proprietary track-resistant polyethylene (TRPE) jacket suitable for installation in electric field potentials up to 25 kV.

## Features and Benefits

### Loose tube design

Mechanical ruggedness and environmental durability

### Self-supporting

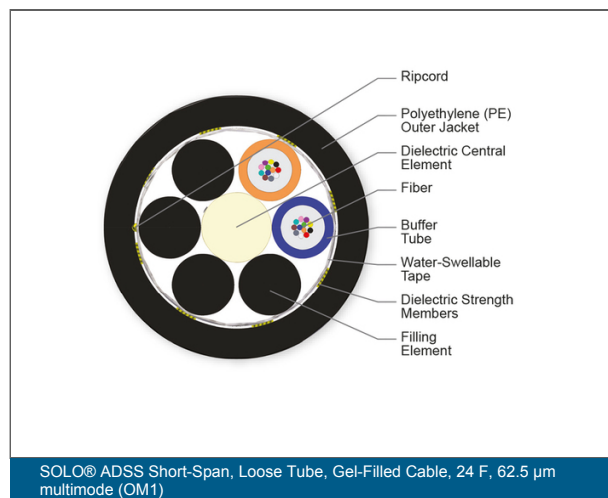
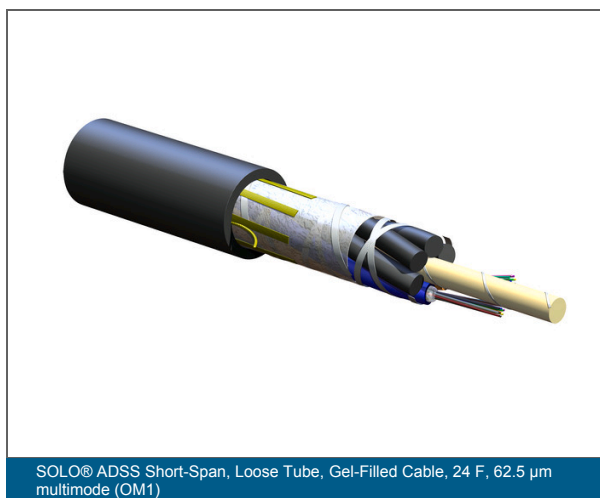
Easy, one-step installation

### Track-resistant polyethylene (TRPE) jacket available

Suitable for installations up to 25 kV electric field potential

### Innovative waterblocking design

Provides efficient and craft-friendly cable preparation



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## Specifications

### General Specifications

|                |                       |
|----------------|-----------------------|
| Cable Type     | Loose Tube            |
| Environment    | Outdoor               |
| Product Type   | Self-Supporting, ADSS |
| Fiber Category | 62.5 µm MM (OM1)      |
| Cable geometry | Other                 |

### Standards

|                          |                                                           |
|--------------------------|-----------------------------------------------------------|
| RoHS                     | Free of hazardous substances according to RoHS 2011/65/EU |
| Approvals and Listings   | RDUP 7 CFR 1755.900 (formerly RUS)                        |
| Common Installations     | Outdoor self-supporting aerial                            |
| Design and Test Criteria | ANSI/ICEA S-87-640                                        |

### Environmental Conditions

|                                 |                                     |
|---------------------------------|-------------------------------------|
| Temperature Range, Installation | -30 °C to 70 °C (-22 °F to 158 °F ) |
| Temperature Range, Operation    | -40 °C to 70 °C (-40 °F to 158 °F ) |
| Temperature Range, Storage      | -40 °C to 70 °C (-40 °F to 158 °F ) |

### Cable Design

|                                                     |                             |
|-----------------------------------------------------|-----------------------------|
| Central Element                                     | Dielectric                  |
| Fiber Count                                         | 24                          |
| Number of Ripcords                                  | 1                           |
| Buffer Tube Color Coding, Layer 1                   | Blue, Orange                |
| Outer Jacket Color                                  | Black                       |
| Outer Jacket Material                               | Polyethylene (PE)           |
| Tensile Strength Elements and/or Armoring - Layer 1 | Dielectric strength members |
| Buffer Tube Diameter                                | 2.5 mm (0.1 in)             |

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## Cable Design

|                            |                                                                                  |
|----------------------------|----------------------------------------------------------------------------------|
| Number of Active Tubes     | 2                                                                                |
| Number of Filling Elements | 4                                                                                |
| Number of Tube Positions   | 6                                                                                |
| Tape                       | Water-swellable                                                                  |
| Fiber Coloring             | Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua |
| Fibers per Tube            | 12                                                                               |

## Mechanical Specifications

|                                 |                    |
|---------------------------------|--------------------|
| Nominal Outer Diameter          | 10.9 mm (0.43 in ) |
| Min. Bend Diameter Installation | 328 mm (12.91 in)  |
| Min. Bend Diameter Operation    | 218 mm (8.58 in)   |

## Optical Characteristics

|                                         |                         |
|-----------------------------------------|-------------------------|
| Fiber Code                              | K                       |
| Performance Option Code                 | 30                      |
| Fiber Category                          | OM1                     |
| Fiber Type                              | Multimode               |
| Fiber Name                              | 62.5 µm MM (OM1)        |
| Maximum Attenuation                     | 3.4 dB/km / 1.0 dB/km   |
| Wavelengths                             | 850 nm / 1300 nm        |
| Fiber Compliance                        | ISO/IEC 11801           |
| Fiber Core Diameter                     | 62.5 µm                 |
| Coating diameter                        | 242 µm                  |
| Serial 1 Gigabit Ethernet               | 300 m / 550 m           |
| Serial 10 Gigabit Ethernet              | 33 m / -                |
| Minimum Effective Modal Bandwidth (EMB) | 220 MHz*km / -          |
| Min. Overfilled Launch (OFL) Bandwidth  | 200 MHz*km / 500 MHz*km |

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## Dimensions

|              |                             |
|--------------|-----------------------------|
| Cable Weight | 92 kg/km (61.82 lb/1000 ft) |
|--------------|-----------------------------|

## Installation Characteristics

|                  | Initial Installation |                     | NESC Light |                     | NESC Medium |                       | NESC Heavy |                       |
|------------------|----------------------|---------------------|------------|---------------------|-------------|-----------------------|------------|-----------------------|
| Span             | SAG                  | Tension             | SAG        | Tension             | SAG         | Tension               | SAG        | Tension               |
| Fiber Count 24   |                      |                     |            |                     |             |                       |            |                       |
| 15 m (49.2 ft)   | 1 %                  | 171 N (38.4 lbf)    | 0.4 %      | 485 N (109 lbf)     | 1.7 %       | 690 N (155.1 lbf)     | 2.4 %      | 1,024 N (230.2 lbf)   |
| 30 m (98.4 ft)   | 1 %                  | 343 N (77.1 lbf)    | 0.5 %      | 846 N (190.2 lbf)   | 2 %         | 1,173 N (263.7 lbf)   | 2.9 %      | 1,705 N (383.3 lbf)   |
| 46 m (150.9 ft)  | 1 %                  | 514 N (115.5 lbf)   | 0.5 %      | 1,167 N (262.4 lbf) | 2.2 %       | 1,594 N (358.4 lbf)   | 3.2 %      | 2,292 N (515.3 lbf)   |
| 61 m (200.1 ft)  | 1 %                  | 685 N (154 lbf)     | 0.5 %      | 1,463 N (328.9 lbf) | 2.3 %       | 1,980 N (445.1 lbf)   | 3.5 %      | 2,827 N (635.5 lbf)   |
| 76 m (249.3 ft)  | 1 %                  | 857 N (192.7 lbf)   | 0.6 %      | 1,744 N (392.1 lbf) | 2.5 %       | 2,342 N (526.5 lbf)   | 3.7 %      | 3,326 N (747.7 lbf)   |
| 91 m (298.5 ft)  | 1 %                  | 1,028 N (231.1 lbf) | 0.6 %      | 2,014 N (452.8 lbf) | 2.6 %       | 2,687 N (604.1 lbf)   | 3.9 %      | 3,799 N (854 lbf)     |
| 107 m (351 ft)   | 1 %                  | 1,199 N (269.6 lbf) | 0.6 %      | 2,274 N (511.2 lbf) | 2.7 %       | 3,019 N (678.7 lbf)   | 4.1 %      | 4,252 N (955.9 lbf)   |
| 122 m (400.2 ft) | 1 %                  | 1,371 N (308.2 lbf) | 0.6 %      | 2,527 N (568.1 lbf) | 2.8 %       | 3,339 N (750.6 lbf)   | 4.2 %      | 4,688 N (1,053.9 lbf) |
| 137 m (449.4 ft) | 1 %                  | 1,542 N (346.7 lbf) | 0.6 %      | 2,774 N (623.6 lbf) | 2.9 %       | 3,650 N (820.5 lbf)   | 4.4 %      | 5,111 N (1,149 lbf)   |
| 152 m (498.6 ft) | 1 %                  | 1,713 N (385.1 lbf) | 0.7 %      | 3,016 N (678 lbf)   | 3 %         | 3,954 N (888.9 lbf)   | 4.5 %      | 5,523 N (1,241.6 lbf) |
| 168 m (551 ft)   | 1 %                  | 1,885 N (423.8 lbf) | 0.7 %      | 3,254 N (731.5 lbf) | 3 %         | 4,251 N (955.7 lbf)   |            |                       |
| 183 m (600.2 ft) | 1 %                  | 2,056 N (462.2 lbf) | 0.7 %      | 3,488 N (784.1 lbf) | 3.1 %       | 4,543 N (1,021.3 lbf) |            |                       |
| 198 m (649.4 ft) | 1 %                  | 2,227 N (500.6 lbf) | 0.7 %      | 3,719 N (836.1 lbf) | 3.2 %       | 4,829 N (1,085.6 lbf) |            |                       |

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| Installation Characteristics |                      |                     |            |                       |             |                       |            |         |
|------------------------------|----------------------|---------------------|------------|-----------------------|-------------|-----------------------|------------|---------|
|                              | Initial Installation |                     | NESC Light |                       | NESC Medium |                       | NESC Heavy |         |
| Span                         | SAG                  | Tension             | SAG        | Tension               | SAG         | Tension               | SAG        | Tension |
| 213 m (698.6 ft)             | 1 %                  | 2,399 N (539.3 lbf) | 0.7 %      | 3,947 N (887.3 lbf)   | 3.2 %       | 5,111 N (1,149 lbf)   |            |         |
| 229 m (751.1 ft)             | 1 %                  | 2,570 N (577.8 lbf) | 0.7 %      | 4,172 N (937.9 lbf)   | 3.3 %       | 5,388 N (1,211.3 lbf) |            |         |
| 244 m (800.3 ft)             | 1 %                  | 2,742 N (616.4 lbf) | 0.7 %      | 4,394 N (987.8 lbf)   |             |                       |            |         |
| 259 m (849.5 ft)             | 1 %                  | 2,913 N (654.9 lbf) | 0.7 %      | 4,615 N (1,037.5 lbf) |             |                       |            |         |
| 274 m (898.7 ft)             | 1 %                  | 3,084 N (693.3 lbf) | 0.7 %      | 4,834 N (1,086.7 lbf) |             |                       |            |         |
| 290 m (951.2 ft)             | 1 %                  | 3,256 N (732 lbf)   | 0.8 %      | 5,051 N (1,135.5 lbf) |             |                       |            |         |
| 305 m (1,000.4 ft)           | 1 %                  | 3,427 N (770.4 lbf) | 0.8 %      | 5,266 N (1,183.8 lbf) |             |                       |            |         |
| 320 m (1,049.6 ft)           | 1 %                  | 3,598 N (808.9 lbf) | 0.8 %      | 5,479 N (1,231.7 lbf) |             |                       |            |         |



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