

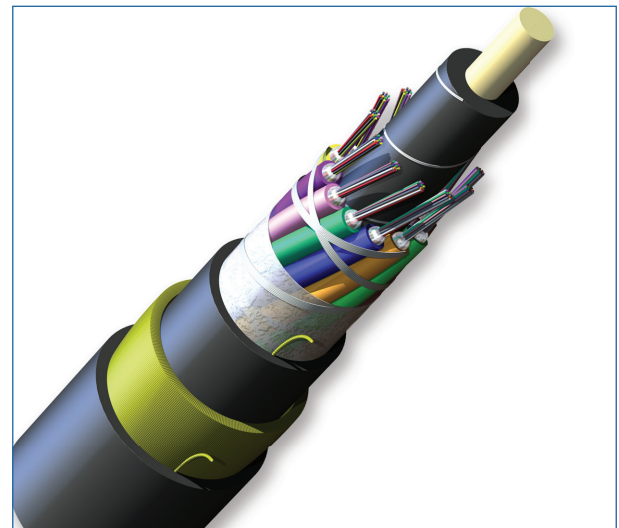
# SOLO® ADSS Loose Tube, Gel-Filled, Dual-Jacket Cable

144 F, 50 µm multimode (OM2)

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Corning SOLO® ADSS optical 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 cable design can span distances in excess of 500 m (1650 ft) in NESC heavy conditions.

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.



Part Number: 144TAE-T4F31A20

## Features and Benefits

### Loose tube design

Stable performance and compatibility with all common fiber types

### Self-supporting

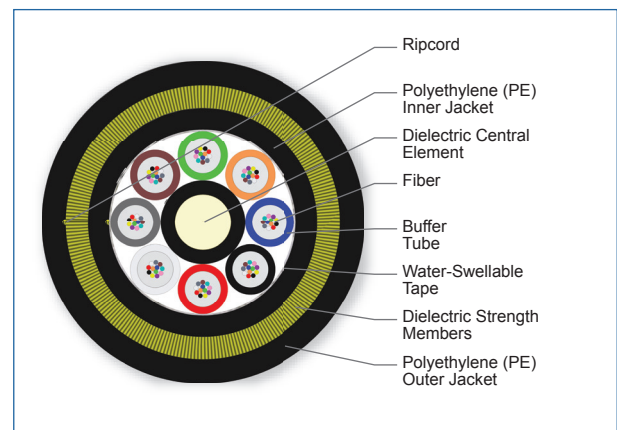
Easy, one-step installation

### Track-resistant jacket available

Suitable for installations up to 25 kV electric field potential

### Innovative waterblocking cable core

Provides efficient and craft-friendly cable preparation



Cross Section of Part Number: 144TAE-T4F31A20

## Standards

### Approvals and Listings

USDA Rural Development Programs

### Common Installations

Outdoor self-supporting aerial

### Design and Test Criteria

ANSI/ICEA S-87-640

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## Specifications

### General Specifications

|                |                 |
|----------------|-----------------|
| Environment    | Outdoor         |
| Application    | Self-Supporting |
| Cable Type     | Loose Tube      |
| Product Type   | Self-Supporting |
| Fiber Category | 50 µm MM (OM2)  |

### Temperature Range

|              |                                    |
|--------------|------------------------------------|
| Storage      | -40 °C to 75 °C (-40 °F to 167 °F) |
| Installation | -30 °C to 70 °C (-22 °F to 158 °F) |
| Operation    | -40 °C to 70 °C (-40 °F to 158 °F) |

### Cable Design

|                                                     |                                                                                  |
|-----------------------------------------------------|----------------------------------------------------------------------------------|
| Central Element                                     | Dielectric                                                                       |
| Fiber Count                                         | 144                                                                              |
| Fiber Coloring                                      | Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua |
| Fibers per Tube                                     | 12                                                                               |
| Number of Tube Positions                            | 12                                                                               |
| Number of Active Tubes                              | 12                                                                               |
| Buffer Tube Color Coding                            | Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua |
| Buffer Tube Diameter                                | 2.85 mm (0.11 in)                                                                |
| Tape                                                | Water-swellable                                                                  |
| Inner Jacket Material                               | Polyethylene (PE)                                                                |
| Tensile Strength Elements and/or Armoring - Layer 1 | Dielectric strength members                                                      |
| Number of Ripcords                                  | 3                                                                                |
| Outer Jacket Material                               | Polyethylene (PE)                                                                |
| Outer Jacket Color                                  | Black                                                                            |

### Mechanical Characteristics Cable

|                               |                            |
|-------------------------------|----------------------------|
| Weight                        | 354 kg/km (238 lb/1000 ft) |
| Nominal Outer Diameter        | 21.8 mm (0.86 in)          |
| Min. Bend Radius Installation | 327 mm (12.9 in)           |

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## Mechanical Characteristics Cable

|                            |                 |
|----------------------------|-----------------|
| Min. Bend Radius Operation | 218 mm (8.6 in) |
| Span Code                  | F               |

## Installation Conditions

| Span<br>m (ft) | Initial Installation |                    | NESC Light |                    | NESC Medium |                    | NESC Heavy |                    |
|----------------|----------------------|--------------------|------------|--------------------|-------------|--------------------|------------|--------------------|
|                | SAG<br>%             | Tension<br>N (lbf) | SAG<br>%   | Tension<br>N (lbf) | SAG<br>%    | Tension<br>N (lbf) | SAG<br>%   | Tension<br>N (lbf) |
| 366 (1200)     | 1                    | 15782 (3551)       | 1.3        | 18707 (4209)       | 2.6         | 20564 (4627)       | 3.5        | 27040 (6084)       |
| 396 (1300)     | 1                    | 17098 (3847)       | 1.3        | 20138 (4531)       | 2.6         | 22071 (4966)       | 3.6        | 28867 (6495)       |
| 427 (1400)     | 1                    | 18413 (4143)       | 1.3        | 21547 (4848)       | 2.6         | 23564 (5302)       | 3.6        | 30667 (6900)       |
| 457 (1500)     | 1                    | 19729 (4439)       | 1.3        | 22956 (5165)       | 2.6         | 25049 (5636)       | 3.6        | 32444 (7300)       |
| 488 (1600)     | 1                    | 21044 (4735)       | 1.3        | 24360 (5481)       | 2.6         | 26520 (5967)       | 3.7        | 34204 (7696)       |
| 518 (1700)     | 1                    | 22360 (5031)       | 1.3        | 25760 (5796)       | 2.6         | 27987 (6297)       | -          |                    |
| 549 (1800)     | 1                    | 23676 (5327)       | 1.3        | 27151 (6109)       | 2.7         | 29444 (6625)       | -          |                    |
| 579 (1900)     | 1                    | 24991 (5623)       | 1.3        | 28542 (6422)       | 2.7         | 30898 (6952)       | -          |                    |
| 610 (2000)     | 1                    | 26307 (5919)       | 1.3        | 29929 (6734)       | 2.7         | 32342 (7277)       | -          |                    |
| 640 (2100)     | 1                    | 27622 (6215)       | 1.3        | 31311 (7045)       | 2.7         | 33782 (7601)       | -          |                    |
| 671 (2200)     | 1                    | 28938 (6511)       | 1.3        | 32689 (7355)       | 2.7         | 35213 (7923)       | -          |                    |
| 701 (2300)     | 1                    | 30253 (6807)       | 1.3        | 34067 (7665)       | -           |                    | -          |                    |

## Chemical Characteristics

|      |                                                           |
|------|-----------------------------------------------------------|
| RoHS | Free of hazardous substances according to RoHS 2011/65/EU |
|------|-----------------------------------------------------------|

## Fiber Specifications

### Optical Characteristics (cabled)

|                         |                       |
|-------------------------|-----------------------|
| Fiber Core Diameter     | 50 µm                 |
| Fiber Category          | OM2                   |
| Fiber Code              | T                     |
| Performance Option Code | 31                    |
| Wavelengths             | 850 nm / 1300 nm      |
| Maximum Attenuation     | 3.0 dB/km / 1.0 dB/km |

Notes: 1) 50 µm multimode fiber macrobend loss ≤ 0.2 dB at 850 nm for two turns around 7.5 mm radius mandrel.  
2) Improved attenuation and bandwidth options available.  
3) Bend-insensitive single-mode fibers available on request.  
4) Contact a Corning Customer Care Representative for additional information.

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## Fiber Specifications

| Optical Characteristics (cabled)        |                         |
|-----------------------------------------|-------------------------|
| Serial 1 Gigabit Ethernet               | 750 m / 500 m           |
| Serial 10 Gigabit Ethernet              | 150 m / -               |
| Min. Overfilled Launch (OFL) Bandwidth  | 700 MHz*km / 500 MHz*km |
| Minimum Effective Modal Bandwidth (EMB) | 950 MHz*km / -          |

Notes: 1) 50 µm multimode fiber macrobend loss  $\leq 0.2$  dB at 850 nm for two turns around 7.5 mm radius mandrel.  
2) Improved attenuation and bandwidth options available.  
3) Bend-insensitive single-mode fibers available on request.  
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## Ordering Information

|                     |                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------|
| Part Number         | 144TAE-T4F31A20                                                                                 |
| Product Description | SOLO® ADSS Loose Tube, Gel-Filled, Dual-Jacket Cable, Span Code F, 144 F, 50 µm multimode (OM2) |



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