

## Enviro-Lite Hybrid™ Greaseless Cable



Forum's new Enviro-Lite Hybrid™ cable utilizes our Enviro-Lite coated cable technology to develop a more robust design, further maximizing your cable run life and substantially reducing costs related to your typical grease and maintenance requirements in the field. The Enviro-Lite Hybrid™ cable is an eco-friendly, electro-mechanical wireline product designed to enable faster running speeds and faster rig-up times, while minimizing maintenance and environmental risks.

### Application

- Cased hole horizontal completions
- Extended reach wells

### Benefits

- Longer run life than conventional cables
- Reduces downtime and maintenance costs with its torque-neutral design
- Eliminates grease costs and mess on location
- Increased running speed in and out of the hole
- Reduced surface tension even on longer deviated wellbore laterals
- Eliminate grease costs and mess on location
- Reduces cable reheading by a factor of 10

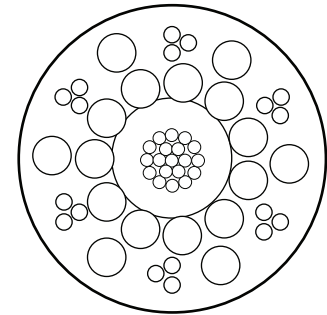
### Features

- Conductor consists of a water blocked stranded copper and a high-temperature fluoropolymer dielectric
- Unique armor package design, combined with an "extrude-to-fill" rugged polymer jacket
- Redesigned outer-armor package increases cable durability
- Rated for up to 375° F
- 9,000 lbs break strength

## Specifications

- 0.350" (8.89MM) Diameter
- 375°F (190°C) Temperature Rating
- Copper Conductor
- FEP/ETFE Insulation
- GEEIPS Armor / GEIPS for 0.0400" wire
- ETFJ Jacket

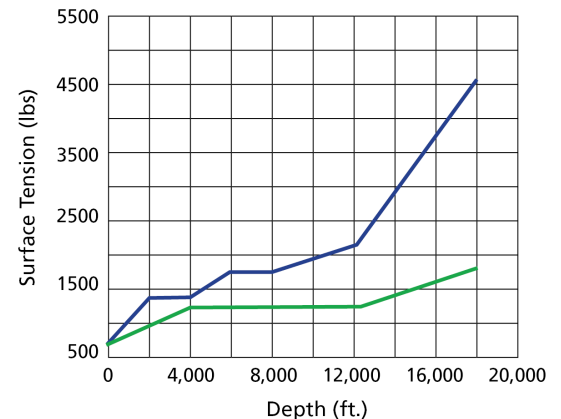
| Construction Characteristics      | English | Metric  |
|-----------------------------------|---------|---------|
| Conductor – 15 AWG , 19 x 0.0142" | 0.071"  | 1.80 mm |
| Wall Thickness                    | 0.033"  | 0.83 mm |
| Insulation – OD                   | 0.136"  | 3.45 mm |
| Aarmor – Inner : 11 Wires 0.0455" | 0.219"  | 5.56 mm |
| Aarmor – Outer: 6 ea @ 3 x 0.020" | 0.302"  | 7.67 mm |
| Aarmor – Outer: 6 ea @ 0.040"     | 0.302"  | 7.67 mm |
| Jacket – OD                       | 0.350"  | 8.89 mm |



| Mechanical Characteristics                    | English                        | Metric   |
|---|--------------------------------|--|
| Weight in Air                                 | 169 lbs/kft                    | 252 kg/km  |
| Weight in Water                               | 126 lbs/kft                    | 188 kg/km  |
| Breaking Strength (Ends Fixed)                | 9,000 lbs                      | 4,082 kg   |
| Working Load (Maximum)                        | 5,000 lbs                      | 2,041 kg   |
| Inner Armor Wire Break Strength               | 535 lbs                        | 2.38 KN  |
| Outer Armor Wire Break Strength (3 x 0.0200") | 192 lbs                        | 0.09 KN  |
| Outer Armor Wire Break Strength (0.0400")     | 370 lbs                        | 1.65 KN  |
| Temperature Rating ( 8 hrs. Maximum)          | 375° F                         | 190° C   |
| Suggested Minimum Sheave                      | 26" dia.                       | 660 mm   |
| Outside Diameter                              | 0.350 $\frac{+.003"}{-0.002"}$ | 8.89 $\frac{+0.076 \text{ mm}}{-0.051 \text{ mm}}$ |
| Stretch Coefficient                           | 1.5 ft/kft/klbf                | 1.7 m/km/5kN                                       |

| Electrical Characteristics             | English      | Metric    |
|--|--------------|-----------|
| Voltage Rating                         | 1,500 VDC    | 1,500 VDC |
| DC Conductor Resistance at 68°F (20°C) | 2.8 Ω/kft    | 9.2 Ω/km  |
| DC Armor Resistance at 68°F (20°C)     | 3.4 Ω/kft    | 11.2 Ω/km |
| Capacitance Conductor to Armor         | 56 pF/ft     | 184 pF/m  |
| Minimum Insulation Resistance          | 1,500 MΩ*kft | 457 MΩ*km |

POOH Weight Comparison



— Conventional E-Line  
— Enviro-Lite Hybrid™