

# ETFE Insulated Singles and Twisted Pairs or Triads

## APPLICATION

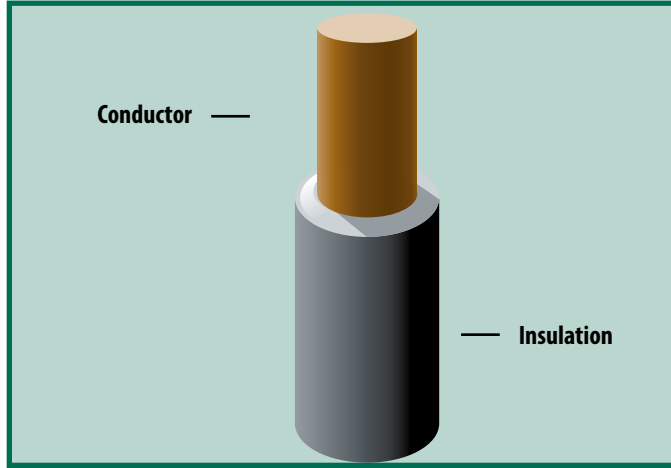
RSCC Aerospace & Defense, a division of RSCC Wire & Cable, Inc., through its Albert H. Surprenant acquisition over twenty years ago, has earned the reputation as one of the world's leading manufacturers of ETFE insulated singles and twisted pairs or triads for wire wrap and power supply markets.

Wire wrapping continues to be used as the method of wiring back panels and test fixtures for printed circuit boards. ETFE, a copolymer of ethylene and tetrafluorethylene is a high temperature resin with a balance of properties. It offers superior mechanical properties, excellent chemical resistance, a melting point of 500 F (260°C) and a nearly unvarying dielectric constant of

2.6 with changing frequencies and temperature. Due to these characteristics ETFE insulated wire continues to be used in this industry.

The medical thermistor wire market has used this product for years in the fabrication of sensors for temperature measurement applications. This construction offers economical, stable, highly accurate temperature monitoring primarily for neonatal skin and incubators.

These insulated wires are available in gauge sizes 22-32, in single conductor, twisted pair or triad constructions, and may be ordered to a variety of UL or CSA listings, as well as conforming to SAE AS81822/13.



Wire wrap and medical applications  
Electronic hook-up  
Miniature leads

Conductor		No. of Conductors	Part Numbers		
AWG	Diameter Inch		UL 1516	UL 1523	SAE AS81822/13
30	.0100	1	U1516-30SO-X	U1523-30SO-X	81822/13-30SO-X
30	.0100	2	U1516-30SO-2-X	U1523-30SO-2-X	-
30	.0100	3	U1516-30SO-3-X	U1523-30SO-3-X	-
28	.0126	1	U1516-28SO-X	U1523-28SO-X	81822/13-28SO-X
28	.0126	2	U1516-28SO-2-X	U1523-28SO-2-X	-
28	.0126	3	U1516-28SO-3-X	U1523-28SO-3-X	-
26	.0159	1	U1516-26SO-X	U1523-26SO-X	81822/13-26SO-X
26	.0159	2	U1516-26SO-2-X	U1523-26SO-2-X	-
26	.0159	3	U1516-26SO-3-X	U1523-26SO-3-X	-
24	.0201	1	U1516-24SO-X	U1523-24SO-X	81822/13-24SO-X
24	.0201	2	U1516-24SO-2-X	U1523-24SO-2-X	-
24	.0201	3	U1516-24SO-3-X	U1523-24SO-3-X	-
22	.0253	1	U1516-22SO-X	U1523-22SO-X	81822/13-22SO-X
22	.0253	2	U1516-22SO-2-X	U1523-22SO-2-X	-
22	.0253	3	U1516-22SO-3-X	U1523-22SO-3-X	-

X = color. See page 67 for color designator.

The above part numbers represent the more popular constructions. However, other designs are available upon request. All products are manufactured to meet RoHS compliance. For exceptions, please contact our sales department.



# ETFE Insulated Singles

## Specifications and Standard Put-up Data

<b>UL Style 1516</b> 105°C, Voltage not specified, 4 mil minimum average wall, 3 mil minimum at any point, silver plated copper conductor or other conductor per UL.				
Conductor		Nom. Diameter Inch	Weight lbs/kft	Standard Put-up ft
AWG	Diameter Inch			
30	0.0100	.0195	.460	20000
28	0.0126	.0220	.670	15000
26	0.0159	.0255	.990	12000
24	0.0201	.0300	1.490	8000
22	0.0253	.0350	2.260	6000

<b>UL Style 1523</b> 105°C, Voltage not specified, 5 mil minimum average wall, 4 mil minimum at any point, silver plated copper conductor or other conductor per UL.				
Conductor		Nom. Diameter Inch	Weight lbs/kft	Standard Put-up ft
AWG	Diameter Inch			
30	0.0100	.0210	.500	18000
28	0.0126	.0240	.720	13000
26	0.0159	.0270	1.040	9000
24	0.0201	.0310	1.540	7000
22	0.0253	.0360	2.320	5000

<b>SAE AS81822/13</b> 150°C, 300 volts, silver plated oxygen free conductor (type B) also available with silver plated copper (type A) or silver plated alloy (type C).				
Conductor		Nom. Diameter Inch	Weight lbs/kft	Standard Put-up ft
AWG	Diameter Inch			
30	0.0100	.0195	.460	20000
28	0.0126	.0265	.800	11000
26	0.0159	.0295	1.120	9000
24	0.0201	.0340	1.650	7000
22	0.0253	.0390	2.450	5000

**OTHER UL STYLES AVAILABLE:** UL 1508, UL 1513, UL 1517, UL 1586, UL 1609  
**CSA GRADES AVAILABLE:** ETFE (150 volts), ETFE (300 volts)  
**CONDUCTORS AVAILABLE:** Silver plated or tin plated ETP copper; Silver plated or tin plated OFHC copper; Silver plated alloy 135

Insulation Properties

Characteristics	Value	Characteristics	Value
Flammability	V-0	Hardness Durometer Shore D	75
Tensile Strength @ yield 23.9°C (p.s.i.)	6000	Flexural Modulus @ 23.9°C (p.s.i.)	200 x 10 <sup>3</sup>
Elongation @ break (%)	100-300	Water Absorption (%)	.03
Dielectric Constant @ 60 cycle	2.60	Service Temperature	135°C - 150°C

For specification and standard put-up data on twisted pairs and triads please visit our website.

