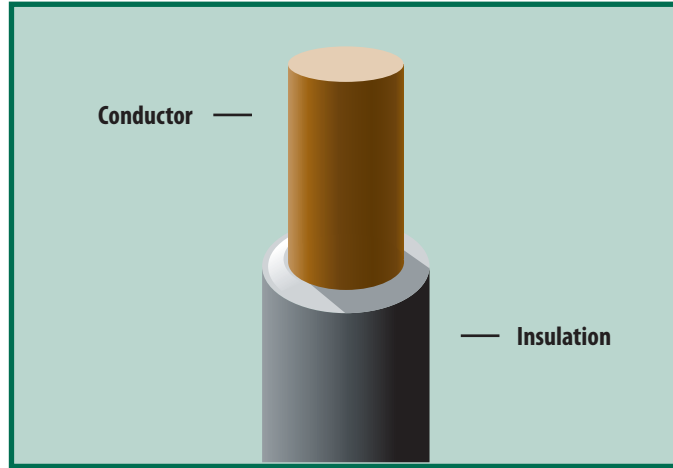


PVDF Insulated Singles and Twisted Pairs or Triads

APPLICATION

RSCC Aerospace & Defense®, a division of RSCC Wire & Cable, Inc., has earned the reputation as one of the world's leading manufacturers of PVDF insulated singles and twisted pairs or triads for wire wrap, power supplies and medical markets.

Wire wrapping continues to be used as the method of wiring back panels, power supply and test fixtures for the printed circuit board market. PVDF has good high dielectric strength and excellent mechanical properties over a broad range of temperatures, thus allowing for a thin wall insulation. Its cut through resistance is far superior to PVC and is a pure and clean polymer unlike PVC. It exhibits very low weight loss when exposed to high vacuum.



Wire wrap and medical applications
Electronic hook-up
Miniature leads

In addition it is resistant to a wide variety of chemicals, including most inorganic acids, bases, alcohols, halogenated solvents, organic acids, aliphatic and aromatic hydrocarbons.

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 AS81822/3.

| Conductor | | No. of Conductors | Part Numbers | | |
|-----------|---------------|-------------------|----------------|----------------|-----------------|
| AWG | Diameter Inch | | UL 1423 | UL 1422 | SAE AS81822/3 |
| 30 | .0100 | 1 | U1423-30SO-X | U1422-30SO-X | 81822/03-30SO-X |
| 30 | .0100 | 2 | U1423-30SO-2-X | U1422-30SO-2-X | - |
| 30 | .0100 | 3 | U1423-30SO-3-X | U1422-30SO-3-X | - |
| 28 | .0126 | 1 | U1423-28SO-X | U1422-28SO-X | 81822/03-28SO-X |
| 28 | .0126 | 2 | U1423-28SO-2-X | U1422-28SO-2-X | - |
| 28 | .0126 | 3 | U1423-28SO-3-X | U1422-28SO-3-X | - |
| 26 | .0159 | 1 | U1423-26SO-X | U1422-26SO-X | 81822/03-26SO-X |
| 26 | .0159 | 2 | U1423-26SO-2-X | U1422-26SO-2-X | - |
| 26 | .0159 | 3 | U1423-26SO-3-X | U1422-26SO-3-X | - |
| 24 | .0201 | 1 | U1423-24SO-X | U1422-24SO-X | 81822/03-24SO-X |
| 24 | .0201 | 2 | U1423-24SO-2-X | U1422-24SO-2-X | - |
| 24 | .0201 | 3 | U1423-24SO-3-X | U1422-24SO-3-X | - |
| 22 | .0253 | 1 | U1423-22SO-X | U1422-22SO-X | 81822/03-22SO-X |
| 22 | .0253 | 2 | U1423-22SO-2-X | U1422-22SO-2-X | - |
| 22 | .0253 | 3 | U1423-22SO-3-X | U1422-22SO-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.



PVDF Insulated Singles

Specifications and Standard Put-up Data

| UL Style 1423 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 | .0100 | .0195 | .470 | 20000 |
| 28 | .0126 | .0230 | .710 | 15000 |
| 26 | .0159 | 0.260 | 1.020 | 11000 |
| 24 | .0201 | .0300 | 1.520 | 9000 |
| 22 | .0253 | .0350 | 2.290 | 6000 |

| UL Style 1422 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 | .0100 | .0210 | .510 | 18000 |
| 28 | .0126 | .0240 | .730 | 13000 |
| 26 | .0159 | .0270 | 1.050 | 9000 |
| 24 | .0201 | .0310 | 1.550 | 7000 |
| 22 | .0253 | .0360 | 2.340 | 5000 |

| SAE AS81822/3 135°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 | .0100 | .0195 | .470 | 20000 |
| 28 | .0126 | .0265 | .810 | 11000 |
| 26 | .0159 | .0295 | 1.140 | 9000 |
| 24 | .0201 | .0340 | 1.680 | 7000 |
| 22 | .0253 | .0390 | 2.470 | 5000 |

OTHER UL STYLES AVAILABLE: UL 1327, UL 1426, UL 1612
CSA GRADES AVAILABLE: PVF2 (150 volts), PVF2 (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 | 75-80 |
| Tensile Strength @ yield 23.9°C (p.s.i.) | 5200 | Flexural Modulus @23.9°C (p.s.i.) | 156-260 x 10 ³ |
| Elongation @ break (%) | 50-250 | Water Absorption (%) | .04 |
| Dielectric Constant @ 60 cycle | 8.40 | Service Temperature | 135°C |

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

