

Flexible, Double Insulated,
High Performance Wire for
a Wide Range of Industrial
Applications

Product Facts

- Highly flame retardant/non melting
- Limited fire hazard
- 600V rated
- Excellent fluid resistance
- Flexible
- Double insulation (for Class 2 equipment)
- Tough, thin wall
- Small size, light weight

FLT



Applications

FLT dual-wall wire combines flexibility with tough thin wall insulation to enable bundles to be routed through areas in which conventional wires cannot be used. Typical applications include control panels, instruments, lighting equipment, electrical appliances, electric motors, electric pumps, robotics, and the automotive industries.

| Available in: | Americas | Europe | Asia Pacific |
|---------------|----------|--------|--------------|
| | | ■ | |

Approvals

Commercial Wire Family

FLT (Continued)

| |
|----------------|
| UL Styles 1385 |
| CSA Class 5851 |
| IEC 332-1 |

Standard Colors

| | | | | | |
|------------|------------|------------|-------------|-------------|-------------|
| Color Code | Black 0 | Brown 1 | Red 2 | Orange 3 | Yellow 4 |
| Color Code | Green 5 | Blue 6 | Violet 7 | Grey 8 | White 9 |

Physical Characteristics

Small Size

FLT equipment wire 600 volt rated has a 0.20 mm nominal wall thickness compared to 0.25mm and 0.38mm for equivalent PTFE and PVC wires in MIL-W-16878, MIL-W-22759 or BS3G210.

Light Weight

Due to the thin wall and low density of the insulation materials, considerable weight savings are made over similarly rated PTFE wires.

For Example: FLT0111 - 0.35 equipment wire 4.38 grams/meter max.

22 AWG PTFE equipment wire MIL-W-22759 5.54 grams/meter max.

General Handling

The flexibility of FLT and the ease with which it takes a 'set' makes it one of the easiest of the 'high performance' wires to install. Stripping is done with conventional die blade

strippers. For details of appropriate tools see separate wire handling guide. The tin-plated copper conductor usually specified is easily soldered or crimped.

Lengths

FLT is available in long continuous lengths and can be supplied for use on automatic cut and strip preparation machines.

Typical Properties

| | |
|--------------------------------------------------|----------------------------------------------------------|
| Temperature rated | (Tin-plated conductor) -65°C to +150°C [-85°F to +302°F] |
| Rated at 125°C [257°F] | In UL style sheet 1385 |
| Voltage rating | 600V |
| No Voltage rating specified | In UL style sheet 1385 |
| Tensile strength + elongation of insulation | 30 N/mm ² , 230% |
| Notch propagation BS 3G230 0.05 mm notch | Pass |
| Meets BS4086/IEC332-1 Flammability test | Pass |
| Solder iron resistance (370°C [698°F], 1 minute) | Pass |
| Shrinkage @ +150°C [+302°F] | < 1% |
| Low temperature bend | -65°C [-85°F] |

tyco*Electronics*

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Commercial Wire Family

Raychem

FLT (Continued)

Environmental Performance

Temperature Rating

FLT wire is rated for continuous operation from -65°C to +125°C [-85°F to +257°F] and for short periods at much higher temperatures.

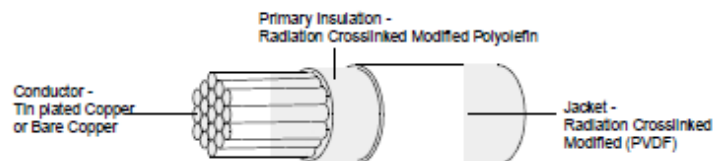
Mechanical Performance

Radiation crosslinking of the FLT insulation significantly improves the following mechanical characteristics; scrape (sharp edges), cut-through resistance and creep resistance.

Solder Iron/Overload Resistance

Radiation crosslinking ensures that the insulation does not melt at high temperature. As a result FLT wire is resistant to hot solder irons and current overloads which would melt most thermoplastic insulations.

Ordering Information



| Nominal CSA mm ² | Conductor Stranding No/Dia mm | Conductor Diameter | | Finished Wire Maximum Resistance @20°C (68°F) ohms/km | Diameter | | Nominal Weight kg/km | Ordering Description |
|-----------------------------------|----------------------------------------|-----------------------|-------------------|-------------------------------------------------------------------|-------------------|-------------------|----------------------------|-------------------------|
| | | min. mm [inch] | max. mm [inch] | | min. mm [inch] | max. mm [inch] | | |
| 0.25 | 19/0.127 | 0.55 [.022] | 0.63 [.025] | 83.6 | 0.91 [.036] | 1.04 [.041] | 2.96 | FLT011X-0.25-Y |
| 0.35 | 19/0.15 | 0.70 [.028] | 0.80 [.031] | 56.1 | 1.06 [.042] | 1.21 [.048] | 4.14 | FLT011X-0.35-Y |
| 0.50 | 19/0.19 | 0.82 [.032] | 0.90 [.035] | 40.1 | 1.18 [.046] | 1.31 [.052] | 6.63 | FLT011X-0.50-Y |
| 0.75 | 19/0.23 | 1.05 [.041] | 1.15 [.045] | 24.7 | 1.41 [.056] | 1.56 [.061] | 8.20 | FLT011X-0.75-Y |
| 1.00 | 19/0.25 | 1.17 [.046] | 1.26 [.050] | 20.0 | 1.55 [.061] | 1.70 [.067] | 10.86 | FLT011X-1.00-Y |
| 1.50 | 19/0.32 | 1.35 [.053] | 1.60 [.063] | 13.7 | 1.73 [.068] | 2.06 [.081] | 16.47 | FLT011X-1.50-Y |
| 2.00 | 19/0.36 | 1.66 [.065] | 1.85 [.073] | 9.9 | 2.12 [.083] | 2.38 [.093] | 20.32 | FLT011X-2.00-Y |
| 2.50 | 19/0.41 | 1.85 [.073] | 2.05 [.081] | 8.2 | 2.31 [.091] | 2.61 [.103] | 26.56 | FLT011X-2.50-Y |

Note: X = Conductor Type 1 = Tin Plated Copper 0 = Bare Copper
Y = Color (see color code on page 9-58)