

# Copper TFFN



600 Volt. Copper Conductor. Thermoplastic Insulation/Nylon Sheath. Heat, Moisture, Oil, and Gasoline Resistant II. Also Rated MTW and 105 °C AWM. Also Available, TFN and TEWN.

## APPLICATIONS

Southwire® Type TFFN or MTW or AWM may be used as fixture wire, machine tool wiring, or appliance wiring material as specified in the National Electrical Code. Voltage for all applications is 600 volts. Allowable temperatures are as follows:

- TFFN- Dry locations not to exceed 90°C
- MTW- Wet locations or when exposed to oil or coolant at temperatures not to exceed 60°C
- MTW- Dry locations at Temperatures not to exceed 90°C (with ampacity limited to that for 75°C conductor temperature per NFPA 79)
- AWM- When rated as appliance wiring material in dry locations, conductor temperatures not to exceed 105°C
- TEWN- Wet or dry locations conductor temperatures not to exceed 105°C

## STANDARDS & REFERENCES

Southwire® Type TFFN or MTW or AWM complies with:

- ASTM- All Applicable Standards
- UL Standards 66, 758, and 1063
- National Electrical Code, NFPA 70, 2011 Edition
- RoHS/REACH

## CONSTRUCTION

Southwire® Type TFFN or MTW or AWM copper conductors are annealed (soft) copper, insulated with a tough, heat and moisture resistant polyvinyl chloride (PVC), over which a nylon (polyamide) jacket is applied. Available in black, white, red, blue, green, yellow, orange, brown, purple, gray, and pink. Some colors standard, some subject to economic order quantity.



# TFFN

| Conductor           |                | Vinyl Insulation (mils) | Nylon Jacket (mils) | Nominal O.D. (mils) | Approx. Net Wt. Per 1000' (lbs.) | Allowable Ampacities+ |     | Standard Package |
|---------------------|----------------|-------------------------|---------------------|---------------------|----------------------------------|-----------------------|-----|------------------|
| Size (AWG or kcmil) | No. of strands |                         |                     |                     |                                  | TFFN                  | MTW |                  |
| 18                  | 16             | 15                      | 4                   | 85                  | 7                                | 6                     | 7   | DNF              |
| 16                  | 26             | 15                      | 4                   | 99                  | 11                               | 8                     | 10  | DNF              |

\* Four 500' spools per carton.  
 +Ampacities shown are for general use as specified by the National Electrical Code, 2011 Edition. TFFN as specified by section 402.5 and MTW as specified by NFPA 79.

STANDARD PACKAGE CODE:  
 F - 500' Spool  
 N - 2000' Carton  
 D - 2500' Spool

### RECOMMENDED SAMPLE SPECIFICATIONS:

Conductors shall be UL-listed Type TFFN or MTW or AWM gasoline and oil resistant II, suitable for operation at 600 volts as specified in the National Electrical Code.

Conductors shall be annealed copper, insulated with high-heat and moisture resistant PVC, jacketed with abrasion, moisture, gasoline, and oil resistant nylon, as manufactured by Southwire Company or approved equal.

# TFN/TEWN

| Size (AWG) | No. of strands | Vinyl Insulation (mils) | Nylon Jacket (mils) | Nominal O.D. (mils) | Approx. Net Wt. Per 1000' (lbs.) | Allowable Ampacity+ | Standard Package TFFN |
|------------|----------------|-------------------------|---------------------|---------------------|----------------------------------|---------------------|-----------------------|
| 18         | 1              | 15                      | 5                   | 80                  | 7                                | 6                   | DNF                   |
| 18         | 7              | 15                      | 5                   | 85                  | 7                                | 6                   | DNF                   |
| 16         | 1              | 15                      | 5                   | 91                  | 10                               | 8                   | DNF                   |
| 16         | 7              | 15                      | 5                   | 96                  | 11                               | 8                   | DNF                   |

\* Four 500' spools per carton.  
 +Ampacities shown are for general use as specified by the National Electrical Code, 2011 edition. TFN as specified by section 402.5.

STANDARD PACKAGE CODE:  
 F - 500' Spool  
 N - 2000' Carton  
 D - 2500' Spool

### RECOMMENDED SAMPLE SPECIFICATIONS:

Southwire Type TFN conductors may be used as fixture wire and as permitted for fire protective signal circuits as specified in the National Electrical Code at conductor temperatures not to exceed 90°C or 105°C when used as AWM. Voltage rating for all applications is 600 volts.

## TFFN

| Conductor                    |                |   |
|------------------------------|----------------|---|
| Size<br>(AWG<br>or<br>kcmil) | No. of strands | Stock Numbers   |
| 18                           | 16             | <b>Stock#: BK:270215, WE:270223, BE:270249, BN:270280, GY:270314, GN:270256, OE:270272, PK:270298, PE:270306, RD:270231, TN:297549, YW:270264</b>               |
| 16                           | 26             | <b>Stock#: BK:270322, WE:270330, BE:270355, BE/WE:567169, BN:270397, GY:270421, GN:270363, OE:270389, PK:270405, PE:270413, RD:270348, TN:297531, YW:270371</b> |

## TFN/TEWN

| Conductor                    |                |   |
|------------------------------|----------------|---|
| Size<br>(AWG<br>or<br>kcmil) | No. of strands | Stock Numbers   |
| 18                           | 1              | <b>Stock#: BK:269779, WE:269787, BE:269803, BN:269845, GY:269878, GN:269811, OE:269837, PE:269860, RD:269795, YW:269829</b> |
| 18                           | 7              | <b>Stock#: N/A</b>  |
| 16                           | 1              | <b>Stock#: BK:269886, WE:269894, BE:269910, BN:269951, GY:269985, GN:269928, OE:269944, PE:269977, RD:269902, YW:269936</b> |
| 16                           | 7              | <b>Stock#: N/A</b>  |

### Color Abbreviations

|           |          |           |          |         |           |
|-----------|----------|-----------|----------|---------|-----------|
| BK-Black  | WE-White | BE-Blue   | BN-Brown | GY-Grey | GN-Green  |
| OE-Orange | PK-Pink  | PE-Purple | RD-Red   | TN-Tan  | YW-Yellow |

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- TFFN- Dry locations not to exceed 90 °C
- MTW- Wet locations or when exposed to oil or coolant at temperatures not to exceed 60 °C
- MTW- Dry locations at Temperatures not to exceed 90 °C (with ampacity limited to that for 75 °C conductor temperature per NFPA 79)
- AWM- When rated as appliance wiring material in dry locations, conductor temperatures not to exceed 105 °C
- TEWN- Wet or dry locations conductor temperatures not to exceed 105 °C

## STANDARDS & REFERENCES

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## CONSTRUCTION

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# TFFN

| Conductor           |                | Vinyl Insulation (mils) | Nylon Jacket (mils) | Nominal O.D. (mils) | Approx. Net Wt. Per 1000' (lbs.) | Allowable Ampacities+ |     | Standard Package |
|---------------------|----------------|-------------------------|---------------------|---------------------|----------------------------------|-----------------------|-----|------------------|
| Size (AWG or kcmil) | No. of strands |                         |                     |                     |                                  | TFFN                  | MTW |                  |
| 18                  | 16             | 15                      | 4                   | 85                  | 7                                | 6                     | 7   | DNF              |
| 16                  | 26             | 15                      | 4                   | 99                  | 11                               | 8                     | 10  | DNF              |

\* Four 500' spools per carton.  
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|------------|----------------|-------------------------|---------------------|---------------------|----------------------------------|---------------------|-----------------------|
| 18         | 1              | 15                      | 5                   | 80                  | 7                                | 6                   | DNF                   |
| 18         | 7              | 15                      | 5                   | 85                  | 7                                | 6                   | DNF                   |
| 16         | 1              | 15                      | 5                   | 91                  | 10                               | 8                   | DNF                   |
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| Conductor                    |                |   |
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