

## Multifilar® Magnet Wire



### ***Parallel bonded magnet wire for more consistent capacitance and impedance characteristics.***

Where constant parallel alignment of multiple strands is an advantage, Multifilar® magnet wire is the right choice. Its parallel-bonded, color-coded construction offers benefits for many applications.

Engineers should specify Multifilar® when concerned with space, weight, and reliability. Where consistent capacitance and impedance characteristics are required, Multifilar magnet wire outperforms windings using two separate magnet wires.

Production users benefit from increased layer winding speeds, tighter windings that deliver more power in less space, reduced

labor and handling. Color coding assists in conductor identification and reduces termination errors.

Manufactures Multifilar® magnet wire to assure flat, parallel construction in sizes 16 AWG and finer, and up to 20 conductors\* wide in some sizes.

Ten insulation colors are offered in polyurethane and poly-nylon films. Red, green and natural are standard for all film types. Consult the chart on the next page for available film insulations and colors.

## General Product Information

| INSULATION CODE NO. | INSULATION TYPE      | THERMAL CLASS | DIELECTRIC CONSTANT | NEMA MW 1000 DESIGNATION | AVAILABLE COLORS   |
|---------------------|----------------------|---------------|---------------------|--------------------------|--|
| 1                   | Polyurethane 155     | 155           | 3.70                | MW 79-C                  | Red, Green, Natural, Blue, Yellow<br>Black, Violet, Orange, White, Brown |
| 1                   | Polyurethane 180     | 180           | 3.70                | MW 82-C                  |  |
| 2                   | Poly-Nylon 155       | 155           | 3.81                | MW 80-C                  | Red, Green, Natural, Blue, Yellow<br>Black, Violet, Orange, White, Brown |
| 2                   | Poly-Nylon 180       | 180           | 3.81                | MW 83-C                  |  |
| 4                   | Polyester 200        | 200           | 3.82                | MW 74-C                  | Red, Green, Natural, Black   |
| 5                   | Armored Polyester    | 200           | 3.86                | MW 35-C                  | Red, Green, Natural, Black   |
| 6                   | Solderable Polyester | 180           | 3.76                | MW 77-C                  | Red, Green, Natural, Black   |
| 7                   | Formvar              | 105           | 7.40                | MW 15-C                  | Red, Green, Natural, Black   |
| 8                   | Polyimide (ML)       | 240           | 3.90                | MW 16-C                  | Red, Green, Natural, Black   |

| BOND CODE NO. | BOND COAT<br>( Operating Temperature ) | SOLVENT*       |
|---------------|--|----------------|
| 1             | Polyvinyl Butyral (105°C)              | Alcohol        |
| 2             | Nylon (105°C)                          | None           |
| 3             | Epoxy (130°C)                          | MEK or Acetone |
| 4             | Polyester (130°C)                      | None           |
| 5             | Polyamide (165°C)                      | None           |
| 6             | Polyimide (ML) (240°C)                 | None           |

| BOND THICKNESS STANDARDS |           |             |
|--------------------------|-----------|-------------|
| AWG SIZE                 | THICKNESS | TOLERANCE   |
| 16-20                    | .0007"    | ± .0002"    |
| 21-28                    | .0005"    | ± .0002"    |
| 29-32                    | .0004"    | ± .0001"    |
| 33-36                    | .0003"    | ± .0001"    |
| 37-41                    | .0002"    | ± .0001"    |
| 42-finer                 | .0001"    | + .0001"/-0 |

\* Bonding films can be softened and removed by immersion in the solvent noted, except nylon, polyester, polyamide and ML which are non-soluble. Wiping with a soft cloth dampened with solvent may be necessary to separate wires.

Finished wire thermal class based on the underlying enamel of the individual strand.