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.

MWS custom 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.

*For constructions of greater than 20 conductors, call or email our sales department.
Multifilar® is a registered trademark of MWS Wire Industries
## General Product Information

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

*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.

### Part Number Ordering System — Make your own part number by following the guidelines outlined below

**Product Letter**
- B: For all Multifilar magnet wire

**Number of Conductors**
- Use ( ) for more than 9 conductors

**AWG Size**
- 1 = single
- 2 = heavy
- 3 = triple
- 4 = quadruple

**Insulation Build**
- See above chart for correct code number

**Insulation Type**
- See above chart for correct code number

**Color Code**
- 0 = none required
- 1 = red/green
- 2 = green/clear
- 3 = red/green/clear
- 4 = red/green/clear/blue
- 9 = special — call for color code

**Bonding Film**
- See above chart for correct code number

**Thermal Class**
- For Poly and Poly-Nylon insulations specify 155 or 180 thermal class

**EXAMPLE** = 2 Conductors — 38 AWG Single Polyurethane 155° — Red/Green — Butyral Bond

### Bond Thickness Standards

<table>
<thead>
<tr>
<th>AWG SIZE</th>
<th>THICKNESS</th>
<th>TOLERANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-20</td>
<td>.0007”</td>
<td>± .0002”</td>
</tr>
<tr>
<td>21-28</td>
<td>.0005”</td>
<td>± .0002”</td>
</tr>
<tr>
<td>29-32</td>
<td>.0004”</td>
<td>± .0001”</td>
</tr>
<tr>
<td>33-36</td>
<td>.0003”</td>
<td>± .0001”</td>
</tr>
<tr>
<td>37-41</td>
<td>.0002”</td>
<td>± .0001”</td>
</tr>
<tr>
<td>42-finer</td>
<td>.0001”</td>
<td>+ .0001”/-0</td>
</tr>
</tbody>
</table>

*SOLVENT*  
- Polyvinyl Butyral (105°C): Alcohol
- Nylon (105°C): None
- Epoxy (130°C): MEK or Acetone
- Polyester (130°C): None
- Polyamide (165°C): None
- Polyimide (ML) (240°C): None

*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.