

Film Insulations

<i>Insulation</i>	<i>Temperature Rating¹</i>	<i>AWG Sizes Available</i>	<i>Advantages</i>	<i>Limitations</i>
Polyvinyl Formal (Formvar)	J-W-1177/4 Class 105°C Type T MW15-C	10-30	<ol style="list-style-type: none"> 1. Very good resistance to abrasion and solvents. 2. Good electrical properties. 	<ol style="list-style-type: none"> 1. Must be stripped before soldering.
Polyurethane	J-W-1177/41 Class 155°C Type SPU MW79-C	32-44	<ol style="list-style-type: none"> 1. Solderable at 750° F. to 800° F. 2. Good film flexibility. 3. Good moisture and chemical resistance. 4. Excellent electrical properties, contributing to the manufacture of high "Q" coils. 	<ol style="list-style-type: none"> 1. Lower abrasion resistance than Polyvinyl Formal, Polyurethane with Nylon overcoat or Polyester, Polyester-amide-imide.
Polyurethane with Nylon overcoat	J-W-1177/42 Class 155°C Type SPUN MW80-C J-W-1177/9 Class 130°C Type SUN MW28-C	25-44 10-24	<ol style="list-style-type: none"> 1. Solderable at 750° F. to 800° F. 2. Excellent film flexibility and abrasion resistance. 3. Good electrical properties. 	<ol style="list-style-type: none"> 1. Not recommended for use in hot transformer oil or freon gases.
Polyester-imide Solderable	J-W-1177/39 Class 180°C Type SPEI MW77-C	26-40	<ol style="list-style-type: none"> 1. Solderable at 800° F. to 850° F. 2. Good electrical properties. 3. Compatible with most varnishes and solvents. 	<ol style="list-style-type: none"> 1. Lower abrasion resistance than Polyurethane with Nylon overcoat or Polyester-amide-imide. 2. Not recommended for use in hot transformer oil or freon gases.
Polyester with Polyamide-imide overcoat²	J-W-1177/14 Class 200°C Type K MW35-C	10-44	<ol style="list-style-type: none"> 1. Good flexibility and abrasion resistance (windability). 2. High solvent resistance. 3. Superior dielectric strength. 4. Excellent electrical properties and excellent moisture resistance. 	<ol style="list-style-type: none"> 1. Not recommended for use in oil-filled power and distribution transformers containing paper or other cellulosic materials. 2. Must be stripped before soldering.
Polyester-amide-imide²	J-W-1177/43 Class 200°C Type PEAI MW74-C			
Polyimide (ML)	J-W-1177/15 Class 220° Type M MW16-C ²	12-30	<ol style="list-style-type: none"> 1. Excellent flexibility. 2. Adequate abrasion resistance. 3. High dielectric strength. 	<ol style="list-style-type: none"> 1. Will solvent craze. 2. Must be annealed 30 to 60 minutes at 175° to 200° C before varnish treatment. 3. Must be stripped before soldering.

¹ Per JW1177B and NEMA MW-1000

² AWG sizes larger than 30 AWG are to MW35-C, sizes 30 AWG and finer are to MW74-C.