



## Class 240 Polyimide Film-Insulated Round Copper Magnet Wire

Table1 Specifications

Insulation materials	aromatic polyimide resins
Thermal Class	240
Dimensions	Single and Heavy 14-50 AWG
Insulation thickness	Single, Heavy
Standard	NEMA MW 16-C



Table 2 Properties

Adherence and flexibility	No cracks visible in the film coating
Minimum Percent Elongation	Not less than the value 7-33
Heat shock	No cracks visible in the film coating after conditioning at 280°C
Dielectric breakdown	<b>14-23.5 AWG:</b> not less than the value in 2470V -5690V <b>24-37 AWG:</b> not less than the value in 1220V -4380V <b>38-56 AWG:</b> not less than the value in 80V -850V
Continuity (V)	<b>14-44 AWG:</b> max number of discontinuities in accordance with 350 ±5% – 1500±5% <b>45-50 AWG:</b> max number of discontinuities in accordance with 10-25
Springback	<b>14-30 AWG:</b> Maximum Degrees per Turn: not greater than the value in 46- 70 Mandrel Diameter (mm): not greater than the value in 82.6±0.127 – 19.0 ±0.127 Tension (±2%): not greater than the value in 4.45 ±2% – 0.56 ±2%

Table 3 Periodic conformance tests

Solubility	Specimens immersed in xylene or 50/50 xylene/butyl Cellosolve shall not soften sufficiently to expose the bare conductor
Dielectric breakdown after R22 conditioning	14-24 AWG: average not less than the value required at room temperature
Scrape resistance	Lowest grams-to-fail load for any one of three tests, and the average of the three tests shall not be less than the values in 260-740
Toluene / ethanol compatibility	No swelling or blistering in the film coating
Thermoplastic flow	Median not less than 450°C
Rated temperature	<b>14-37 AWG:</b> average not less than 75% of value in 1220V – 5690V
Refrigerant R22 extraction	<b>14-24 AWG:</b> not greater than 0.25% of weight of film insulation

### Features

Radiation resistance

Solvent resistance

Cryogenic resistance

electrical properties

Highest thermal stability (> 20000 hrs. at 243 °C)

Exceptional resistance to chemicals

Outstanding mechanical properties

Stable electrical properties over wide range of temperature (25 °C to 250 °C)

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