



COPPER WIRE, SOFT ROUND, WITH POLYAMIDE-IMIDE INSULATION, 200 °C

WSF-M2L68-A7/A8/A9

1. SCOPE

The material defined by this specification is a soft round copper wire with a heavy film high temperature insulation.

2. APPLICATION

This specification was released originally for material used for the fuel pump armature winding.

3. REQUIREMENTS

3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.4 COLOR See Table

3.5 BARE WIRE

3.5.1 Size See Table

3.5.2 Conductor Resistance, max See Table

3.6 JOINTS

Joints in the wire shall be as uniformly covered with insulation and overcoat as the rest of the wire.

The wire shall be one continuous length for each spool. There shall be as few joints as possible in the copper and such joints as are necessary to bring the wire up to the required spool weight shall be made by brazing with silver solder or by welding. The diameter of the wire at the joint shall meet the dimensional requirements of para 3.3.1. The surface of the wire at the joint shall be smooth.

The tensile strength of the wire at the joint shall be at least 80% of the tensile strength of the wire 0.9 - 1.2 m from the joint.

3.7 COATING

3.7.1 Type Polyamide-imide insulation

3.7.2 Appearance No rough surface. Even gloss and color

3.7.3 Insulation Thickness
(NEMA MW 1000, para 3.1.1.1) See Table

Date	Action	Revisions
2005 02 14	Revised	Inserted 3.0; Deleted 3.1, 3.2, 3.3, 3.10, 4
1994 05 31	Revised	NGA1E10370437005 Released A9, Rev. 3.7.3 & Table A. Vallabhanath
1993 04 30	Released	NGA1E10269419003 A. Vallabhanath



3.7.4	Adhesion (NEMA MW 1000, para 3.2.1.1/IEC 851, para 3.5)	The insulation must not show puncture, crack or break
3.7.5	Flexibility (NEMA MW 1000, para 3.2.1.1/IEC 851, para 3.5)	The insulation must not show puncture, crack or break
3.7.6	Elongation, min (NEMA MW 1000, para 3.3.1.1/IEC 851, para 3.3)	23%
3.7.7	Chemical Resistance (NEMA MW 1000, para 3.51.1.1/IEC 851, para 4.3)	The insulation must not show puncture, crack, or break

3.8 COATED WIRE

3.8.1	Softness of Copper, Springback, max (NEMA MW 1000, para 3.6.1.1/ IEC 851, para 3.4)	70°
3.8.2	Dielectric Strength, min (NEMA MW 1000, para 3.2.1.1/ IEC 851, para 5.4)	2000 volts
3.8.3	Fault Testing, max (NEMA MW 1000, para 3.8.1.1/ IEC 851, para 5.5.2)	5
3.8.4	Heat Shock (NEMA MW 1000, para 3.4.1.1)	The insulation must not show puncture, crack or break
3.8.5	Thermoplastic Flow, min (NEMA MW 1000, para 3.50.1.1/ IEC 851, para 6.4)	370 °C
3.8.6	Scrape Resistance, min (NEMA MW 1000, para 3.59.1.1)	415 g

3.9 CONFORMITY WITH THIS SPECIFICATION

In the case of failure under any of the foregoing tests, two additional tests shall be made, and the wire shall be regarded as meeting the requirements of this specification if the results of the additional tests are satisfactory. The wire shall be regarded as not meeting the requirements of this specification if the results of either of the two additional tests are unsatisfactory.