

**SPECIFICATION FOR**  
**“MBJ” TINNED COPPER EARTHING BRAIDS**  
**or engineering approved equivalent per the specification below**

**1. SUMMARY**

This specification covers the technical requirements of the MBJ tinned copper earthing braids for use in applications where electrical connections between metal parts/live parts and grounding/ equipotential bonding systems are required.

MBJ braids shall be suitable for use in applications where high EMC/EMI performance is essential.

**2. COMPLIANCE REQUIREMENTS**

- a. ANSI/UL 467 “Grounding and Bounding Equipment” (listed by Underwriters Laboratories under this category)
- b. IEC 61439-1 “Low-voltage switchgear and controlgear assemblies”
- c. GOST certificate or Customs Union certificate
- d. RoHS 2002/95/EC Compliant

**3. PRODUCT COMPOSITION**

**a. Braids**

The braids must be made with electrolytic copper Cu-ETP according to EN13602 and with purity of minimum 99.9%. The wire diameter must be 0.15mm and be tin plated. The maximum resistivity at 20°C shall be  $0.017241 \Omega \cdot \text{mm}^2/\text{m}$ .

**b. Terminal**

The braids must be manufactured using a process which provides a reliable electrical connection and superior tensile strength by not relying on the addition of a crimped lug or terminal at the end of the braid but rather by providing an integral palm at the end of the braid. A hole should be punched in the terminal.

**4. PRODUCT CHARACTERISTICS**

**a. Physical**

The braids shall be having a rectangular cross section with pre-punched holes on both ends.

The thickness of the integral palm shall be less than that of the braid but sufficient enough to meet the size of the cross-section indicated in the supplier datasheet.

The braids shall rely on no crimped lugs, forged lugs or metal tubes to comply with section 2.

Visible red copper (non-tinned) inside the surface of the connecting hole and on the ends of the palm is allowed. The tin plated electrical contact surface is mandatory.

Tolerances for hole position according NF C20-130.

**b. Environmental**

The maximum operating temperature of the braids shall be 105°C.

**c. Performance**

The tensile strength and tightening torque of the braid must exceed the requirements of NF C 20-130.

**5. MANUFACTURER'S QUALIFICATION AND QUALITY CONTROL**

- a. Manufacturer shall be ISO9001:2008 certified and manufacturing and quality control be done accordingly.
- b. Manufacturer shall be following a health & safety program at least as stringent as the United States Occupational Health & Safety Administration program.