

IS 13730 (Part 3): 2012 Specifications for particular types of winding wires: Part 3 polyester enamelled round copper wire, class 155

Polyester enamelled round copper wire Class 155 is a type of insulated wire which is made of high-quality copper, having excellent electrical conductivity and provided with a sole coating based on polyester resin. The insulation may also be made with a modified resin containing performance enhancing additives but having the chemical identity of the original resin. Class 155 is a thermal class that requires a minimum temperature index of 155 and a heat shock temperature of at least 175 °C.

Polyester enamelled round copper wire Class 155 are commonly used in electrical applications, particularly in motors, transformers, and other winding applications where reliable performance at elevated temperatures is essential.

Indian Standard on Polyester enamelled round copper wire Class 155 was first published in 1996. Thereafter, the Standard was revised in 2012 as IS 13730 (Part 3): 2012 to align with the latest version of IEC Standard.

The range of nominal conductor diameters covered under the standard are as follows:

- (a) Grade 1: 0.020 mm up to and including 3.150 mm
- (b) Grade 2: 0.020 mm up to and including 5.000 mm

The Standard specifies requirements such as Appearance, Dimensions, Electrical resistance, Elongation, Springiness, Flexibility and adherence, Heat shock, Cut-through, Resistance to abrasion, Resistance to solvents, Breakdown voltage, Continuity of insulation, and Temperature index.