



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**.

In summary, Polyester enamelled round copper wire Class 155 complying with **IS 13730 (Part 3): 2012** ensures that these wires are **durable**, of **high quality** and **safe to use at high temperatures**.