



Indian Standard IS 13730 : PART 8 : 2014 – Specification for Particular Types of Winding Wires Part 8 Polyesterimide Enamelled Round Copper Wire, Class 180

Polyesterimide Enamelled Round Copper Wire, Class 180 is a high-performance **electrical wire** commonly used in various **industrial** applications, including **electric motors, transformers, and other coil-based machinery**. This wire is made from **copper**, a material known for its excellent **electrical conductivity**, and is coated with a **polyesterimide enamel** insulation. The enamel provides crucial **thermal, mechanical, and electrical** properties, making it suitable for high-temperature environments.

The "**Class 180**" designation indicates that the wire's **insulation** can withstand continuous operating temperatures of up to 180°C without degradation. This temperature rating is particularly important for applications where heat is a by-product of the **electrical current**, ensuring that the wire maintains its integrity and insulation properties over time, even under stress. The wire's **round** shape is standard for applications requiring coils, such as in **motors and transformers**, offering efficient space utilization and ease of winding.

Consumers of polyesterimide enamelled copper wire typically expect the key qualities like **High Thermal Endurance, Durability and Longevity, Electrical Insulation, Reliability and Compliance with Standards**. The **IS 13730-8** developed by Bureau of Indian Standards (BIS) addresses these expectations by specifying the requirements for **quality control, thermal endurance, mechanical properties, and dimensional tolerances** of enamelled copper wire. It ensures that the wire can withstand the specified **temperature rating** (Class 180) and meets stringent quality checks for **insulation, conductivity, and durability**. Adherence to this standard ensure that the wire meets **safety and performance** expectations, providing consumers with reliable, high-quality products that are suitable for demanding industrial applications. **IS 13730-8** is identical to **IEC 60317-8** which gives confidence to the consumer that the product is tested according to international standards.