



IS 2067: 1975- Specification for Wrought Aluminium Wire For Electrical Purposes

Wrought aluminum wire is a solid, circular wire made from aluminum that is processed through mechanical methods like rolling or drawing to achieve its final shape and properties. This type of aluminum wire is valued for its **high conductivity**, **corrosion resistance**, and **lightweight** nature, making it ideal for electrical applications such as cables, windings, and other conductors in **transformers** and **motors**. Unlike cast aluminum, wrought aluminum wire is formed without melting, resulting in greater strength, flexibility, and durability for use in electrical and industrial environments.

Good quality wrought aluminum wire should have **high electrical conductivity**, adequate tensile strength, and **consistent dimensional accuracy**. It must be free from surface defects and exhibit **excellent corrosion resistance**, ensuring durability and reliable performance in electrical applications.

This standard specifies the requirements for wrought aluminum wire used for electrical purposes. This standard applies to solid circular aluminum wire, primarily used in insulated cables and winding wires for **electrical machinery**, like transformers and motors. The document covers important parameters such as the wire's chemical composition, mechanical properties (like tensile strength and elongation), and electrical resistivity.

Three temper conditions are specified for the wires – annealed (O), three-quarter hard (H3), and hard (H4) – with the appropriate temper chosen based on the wire's intended use. The standard also details the **wire's diameter tolerance**, **surface condition** (ensuring the absence of defects like scratches or pits), and the mechanical strength required. **Electrical resistivity values** are also outlined to ensure efficient conductivity.

The wire must undergo tests for tensile strength, elongation, and electrical resistivity, and there are strict guidelines for rejecting or retesting materials that fail initial tests. Packaging and labelling requirements ensure that the wire is delivered safely and traceably. This standard ensures **consistency in the quality of aluminum wires** for reliable electrical applications.