

**IS 398 (Part 6) "Aluminium Conductors for Overhead Transmission Purposes Part 6
High Conductivity Aluminium Alloy Stranded Conductors — Specification"**

IS 398 (Part 6) specifies requirements for high conductivity aluminium alloy stranded conductors used in overhead transmission lines. These conductors consist of multiple aluminium alloy wires twisted together, offering a balance of electrical conductivity, mechanical strength, and corrosion resistance suitable for power transmission in diverse environmental conditions.

Consumers and utility companies expect reliable performance, high tensile strength, excellent electrical conductivity, durability under varying environmental stresses, and lightweight construction to ease installation and maintenance. Consistent performance over the product's lifecycle, particularly in terms of corrosion resistance and thermal stability, is also critical for safety and efficiency.

The standard addresses these expectations by defining strict guidelines on material composition, physical and mechanical properties, conductor construction, electrical characteristics, and performance testing. Requirements for tensile strength, conductivity, surface treatment, and tests for environmental resistance ensure that conductors meet minimum quality thresholds for durability and reliability. This helps ensure efficient, safe, and long-lasting power transmission networks.