



INDIAN STANDARD 8309 -
SPECIFICATION FOR COMPRESSION TYPE TUBULAR TERMINAL ENDS FOR ALUMINIUM CONDUCTORS OF
INSULATED CABLES

Tubular terminal ends, also known as lugs, are used to make **electrical connections** to other components in a circuit. They come in various types and materials. This Indian Standard specifies the material and dimensional requirements of aluminium **compression type** tubular terminal ends for **aluminium conductors of insulated cables** for rated voltages up to and including **11 kV**.

To ensure that the Aluminium Conductors of Insulated Cables are properly connected without any loss, material with **good conductivity** and suitable **dimensions** for proper connection are prerequisites. For durability the material used should have good strength.

IS 8309 addresses these requirements by specifying usage of Aluminium material of **Grade 19501** of **IS 5082:1998** which is '*Specification for wrought aluminium and aluminium alloy bars, rods, tubes and sections for electrical purposes*' and also by specifying standard dimensions (Tables 1 and 2) for different sizes. For safer handling during installation, it is specified that the Edges and corners shall be free from burrs and sharp edges.

The tests carried out on the product are as given below

1. **Visual Examination and Dimensional Check-up** – For better fitment and also to examine for freedom from flaws, rust, crevices, cracks and other defects harmful for the joint.
2. **Flattening Test** – To ensure that the material does not crack during installation.
3. **Electrical Conductivity Test** – For good conductivity of tubular terminal ends.

In summary, **IS 8309** facilitates proper electrical performance through precise material and design specifications.

