

Summary of IS 4026:2023

Aluminium Ingots, Billets and Wire Bars (EC GRADE)

The Indian Standard IS 4026:2023 establishes **comprehensive guidelines for EC-grade (Electrical Conductivity) aluminium products, including ingots, billets, and wire bars**, which are essential for various electrical and industrial applications across India. Originally issued in 1967 and revised multiple times, this standard reflects evolving industry needs and quality standards. The latest revision introduces significant updates, such as a **"scrap" definition, a new aluminium alloy grade, and enhanced details on ordering information, quality rejection criteria, retesting protocols, and packaging guidelines**.

Consumers and industry professionals prioritize **purity, traceability, and performance** when selecting aluminium for electrical applications, as these qualities directly affect **electrical conductivity and durability**. IS 4026:2023 addresses these expectations by specifying four grades of EC-grade aluminium based on purity levels (**ranging from 99.8% to 99.5%**) and defining strict limits for **trace elements like silicon, iron, and copper that can impact conductivity and material stability**. To ensure high-quality materials, the standard mandates production from **virgin aluminium, allowing only specific types of scrap to be incorporated** if they meet stringent quality requirements.

The standard also prescribes methods **for chemical composition verification, notably referencing the IS 504 series for consistent analysis of aluminium and its alloys**. Quality control measures are applied through random sampling, while detailed packaging and marking requirements ensure that each product is traceable and complies with BIS certification standards.

In summary, IS 4026:2023 provides a **crucial regulatory framework for the Indian aluminium industry, reinforcing high standards in purity, quality assurance, and reliability**. This standard not only supports domestic manufacturing and quality assurance but also **aligns Indian practices with global standards, promoting excellence in aluminium production for electrical and industrial use/applications**.