



IS 12171 : 2024- Cotton Bales — Specification

Cotton has an ancient history, with evidence of its use found in Mexico dating back at least 7,000 years. In the Indus Valley Civilization, cotton was grown, spun, and woven into cloth as early as 3,000 BC. Building on this long-standing textile tradition, the **Indian Standard IS 12171: 2024** establishes quality specifications for **cotton bales**, vital raw materials in modern textile production. Cotton bales, consisting of ginned cotton fibres, are foundational in ensuring the quality of textile goods. Both consumers and manufacturers seek reliable quality attributes such as uniform fibre length, optimal moisture levels, minimal trash content, and high fibre strength, all essential for efficient production and high-quality finished products.

IS 12171: 2024 rigorously defines these parameters to meet industry standards. Fibre length is categorized by staple length (extra-long, long, medium, and short), each with specific tolerance limits to guarantee uniformity. Maintaining low **trash content** (e.g., chaff and dirt) is crucial for reducing impurities in the manufacturing process; the standard sets allowable trash levels based on staple length to assure bale quality.

The standard restricts **moisture content** to a maximum of 8 percent, preventing microbial growth and excess weight, which can complicate storage, transport, and processing. Additionally, **fibre strength** and **micronaire values** (indicating fibre fineness and maturity) are established to ensure resilience and suitability for various textile processes.

Guidelines for **bale packaging** further protect fibre quality, requiring full cotton fabric covers, specific dimensions, and secure strapping. Labelling protocols provide traceability details like cotton variety, bale weight, and origin, enhancing transparency across the supply chain. Altogether, IS 12171: 2024 promotes high-quality cotton bale production, supporting consistency, reliability, and efficiency in the textile industry.