

The product defined in the IS 17953:2023 standard is unplasticized polyvinyl chloride (uPVC) profiles used for fabricating windows and doors. These profiles, made from uPVC, are widely recognized for their durability, corrosion resistance, and structural stability, which make them suitable for building applications. The uPVC profiles can include main profiles, which bear load in doors and windows, as well as auxiliary profiles that provide support but carry less structural load. The profiles may have visible and non-visible surfaces, with specific treatments to resist UV radiation and weathering.

Consumers expect uPVC profiles to exhibit high-quality parameters, such as durability, stability under UV exposure, and resistance to impact and heat. Additionally, they require consistent color, smooth finishes, structural strength to withstand external forces, and resistance to environmental degradation over time. Good quality uPVC profiles should meet strict tolerance levels for dimensions, wall thickness, and flatness, ensuring uniform appearance and ease of installation. Profiles must also possess adequate weldability to support reliable and safe construction in window and door assemblies.

The IS 17953:2023 standard addresses these quality expectations by setting precise requirements for raw materials, additives, and manufacturing processes. Tests specified in the standard include assessments of impact strength, tensile strength, heat reversion, and color fastness under weathering conditions, all intended to maintain quality and durability. The standard also mandates the use of UV-resistant materials and recyclable options in specific layers to align with environmental standards. Tolerances for profile dimensions and structural features ensure that profiles meet aesthetic and functional needs, making the standard a comprehensive framework for producing high-quality uPVC profiles that fulfill consumer expectations.