IS 2553 (Part 1): 2018

Safety Glass- Specification Part 1 Architectural, Building and General uses

Glass is a non-crystalline, amorphous solid primarily composed of silica (SiO_2), which is derived from sand. This silica-based substance, often in combination with other elements such as lime and soda, is heated to an extremely high temperature until it melts and becomes a viscous liquid. Upon cooling, it hardens into the glass. Alterations in the basic composition or additional treatments during the manufacturing process can enhance specific characteristics such as strength, insulation properties, or resistance to impacts, leading to a range of specialized glass products designed to meet the diverse needs of modern architecture.

Several intrinsic properties of glass such as Transparency, Strength, Insulation, Recyclability and Design Flexibility make Glass an appealing material for architectural applications. Use of Glass in Buildings offers various practical benefits, such as natural lighting, thermal regulation, energy efficiency, and unparalleled aesthetic versatility.

The safety glass standard (Part 1), initially published in 1963 and updated in 1964, 1971 and 1990. It prescribes the specifications for glass used in a wide range of applications, from buildings and furniture to vehicles and appliances and has been continually updated to reflect significant technological advancements and enhance safety measures.

These revisions include key updates such as clearer terminology, updated thickness and dimensional tolerances for precision, new requirements such as squareness for structural integrity. New sampling methods to improve testing reliability and annexes address issues like nickel sulfide-induced breakage. Stricter standards for toughened and laminated safety glass now ensure better performance in terms of flatness, impact resistance, and edge treatment, further enhancing safety and reliability.