

Summary of IS 2553 (Part 2): Safety Glass for Road Transport

IS 2553 (Part 2): 2019, along with subsequent amendments, specifies safety glazing requirements for motor vehicles. It covers windscreens, windows, and roof glazing for vehicle categories M, N, A, C, combine harvesters, and L vehicles with bodywork partially covering the driver. Exclusions include glazing for decorative purposes, soft-top plastic windows, lighting and signaling devices, and bullet-resistant glass. Double windows are treated as separate glazing items.

The standard introduces innovative glazing materials, such as laminated glass with plastic faces, treated laminated glass, and glass-plastic combinations. It ensures that safety glass minimizes injury risks during accidents while maintaining durability and visibility.

Performance requirements focus on maintaining adequate transparency. Windscreens and rear windows must have a minimum light **transmittance** of 70%, while side windows must allow at least 50% transmission. Additional requirements address abrasion, fragmentation, and resistance to environmental factors such as temperature, fire, and chemicals to meet safety benchmarks.

Marking requirements ensure traceability and compliance, with each piece of safety glass clearly labeled to indicate its type and manufacturer details. The standard sets uniform testing methods and conditions for evaluating mechanical, optical, and thermal properties. Alternative test procedures are recognized, ensuring flexibility without compromising reliability.

These measures collectively enhance the safety and durability of glazing materials, contributing to improved road safety and better protection for vehicle occupants. This standard supports the development of safer and more reliable vehicles, meeting the demands of modern transportation and infrastructure.