



IS 4148: 1989 Surgical Rubber Gloves – Specification

Surgical gloves in India are essential for ensuring safety and hygiene in medical procedures. Made from high-quality latex, nitrile, or vinyl, they provide a reliable barrier against infections. With increasing demand in healthcare settings, these gloves adhere to international quality standards. They are designed for comfort, flexibility, and optimal protection during surgeries and examinations.

IS 4148: 1989 outlines the requirements for Surgical Rubber Gloves, covering manufacturing processes, dimensions, thickness, physical properties, packaging, and labeling. The standard specifies several test methods to ensure the gloves meet these requirements, including tensile strength and elongation tests, which are conducted using four dumbbell-shaped test pieces as per IS 3400 (Part 1). Additionally, gloves undergo an Accelerated Aging test in an air-oven at $70 \pm 1^\circ\text{C}$ for 240 hours, in line with IS 3400 (Part 4), to assess material durability. The Autoclave test involves sterilizing the gloves in steam at 1 kgf/cm² pressure for 20 minutes at 115-120°C, repeated for six cycles, to check their tensile strength and elongation. The standard also includes a separate annexure detailing methods for measuring glove dimensions to ensure proper fit and performance.

The Indian Standard IS 4148: 1989 establishes comprehensive guidelines for the manufacturing, testing, and quality control of surgical rubber gloves. By outlining specific requirements such as dimensions, thickness, physical properties, and sterilization processes, the standard ensures that gloves meet rigorous safety and performance criteria. Through detailed testing methods, including tensile strength, aging, and autoclave tests, it guarantees that the gloves maintain their integrity and functionality in medical environments. This standard plays a crucial role in maintaining the highest levels of hygiene and protection in healthcare settings.