



Indian Standard IS 10908:2023 – Guide to safe Flexible Rubber Tubing for LPG

IS 10908:2023 provides specifications for flexible rubber tubing used in Liquefied Petroleum Gas (LPG) applications. It outlines requirements and safety standards to ensure compatibility with LPG equipment and provides guidelines on manufacturing, testing, and certification for such tubing.

The flexible rubber tubing covered by this standard is suitable for use in LPG vapour phase only. This tubing is suitable for installation where the working pressure does not exceed **0.005 MPa (5 kPa)**. Flexible tubing covered by this standard is not suitable for gas cutting and allied processes using oxygen.

There are other standards for LPG hoses i.e. IS 9573: Part 1: 2017 which is suitable for industrial applications for and maximum working pressure of 2.5 MPa while IS 9573: Part 2: 2017 is suitable for maximum working pressure up to 1.0 MPa.

This standard was first published in 1984 and subsequently revised in 1991. In the last revision carried out in 2023, the test method for the determination of shore hardness has also been included.

Tubing sizes covered are 6.4 mm and 7.0 mm inner diameters. Standards include resistance to outdoor conditions, seamless construction, flexibility, durability, and colour specifications.

The important tests outlined in IS 10908:2023 for flexible rubber tubing for liquefied petroleum gas (LPG) are categorized into three main types: **Type tests, Acceptance tests & Routine tests.**

Type tests are carried out to prove conformity with the specification. These include **Workmanship & finish, Dimensions, Grip strength test, Pressure test, Hardness test, Accelerated ageing test, Flexibility test, Crushing test, Resistance to LPG, Resistance to Ozone and Burning behaviour.**

Acceptance tests are carried out on samples taken from a lot for the purpose of acceptance of the lot. These include **Workmanship & finish, Dimensions, Pressure test, Hardness test, Accelerated ageing test, Flexibility test, Crushing test and Burning behaviour.**

Routine tests are carried out at manufacturer's work on each LPG tubing to check the requirements which are likely to vary during manufacturing/production. Tests for **workmanship and finish, dimensions, hardness, and crushing** are performed routinely.

Tubing is marked with details like manufacturer, working pressure, size, and expiration date along with standard mark if the requirements of standard are met.

This standard emphasizes the importance of quality and conformity to standards to prevent risks associated with LPG usage, supporting safety and reliability in household and commercial LPG applications.