



## **IS 446 : 2017, RUBBER HOSES, TEXTILE-REINFORCED, FOR COMPRESSED AIR — SPECIFICATION**

**Textile-reinforced rubber hoses for compressed air** are primarily used in industries to safely transport compressed air and support many industrial processes.

Given their use in critical industrial applications, it is essential for these hoses to have sufficient **mechanical strength**, resistance to liquids like oil, and the capability to **withstand high working pressures**.

The Indian Standard IS 446:2017 specifies the requirements for textile-reinforced rubber hose for compressed air, up to a maximum working pressure of 25 bar with an **operating-temperature** range of – 40 °C to + 70 °C, depending on the type and category. The standards classifies the hoses into three types (Type 1, 2 and 3) depending on the working pressure, three classes (Classes A, B and C) depending upon the oil resistance property and two categories (Category N-T and L-T) depending upon the operating temperature.

The crucial requirements specified in the standard include **dimensions** and tolerances, physical properties such as **tensile strength**, **resistance to ageing**, **resistance to liquids**, proof pressure, Minimum **Burst pressure**, Ozone resistance and **flexibility**.

Rubber hoses conforming IS 446:2017 undergo various tests to ensure that they comply to the above quality benchmark. For instance, tensile strength and elongation tests validate material **durability**, while hydrostatic tests confirm the hose's pressure-handling capabilities, including proof and burst pressures. Flexibility tests ensure usability in varying climates, and **ageing resistance** tests ascertain longevity. The hoses must also meet strict requirements for **concentricity** and **adhesion between layers**.

In summary, IS 446:2017 establishes a comprehensive framework for textile-reinforced rubber hoses, detailing performance criteria that ensure their **safety** and **efficiency in industrial applications**.

BIS standard mark on the product ensures that it conforms to IS 446 and guarantees **reliable** and **high-quality Rubber Hoses**.