



Summary

Polyethylene Pipes for Water Supply - Specification

IS 4984: 2016

Polyethylene (PE) pipes, specifically high-density polyethylene (HDPE) pipes, are extensively used in water supply systems due to their **flexibility, durability, and resistance to corrosion**. Available in grades like PE 80 and PE 100, these pipes are designed to withstand varying levels of pressure and offer strength suitable for urban and rural water distribution. Their **chemical resistance and smooth inner surface** make them efficient in reducing friction and enhancing water flow, which adds to their suitability in large-scale water supply infrastructure. The pipes are known for their **long service life and minimal maintenance needs**, making them a cost-effective choice for water distribution networks.

Consumers of PE pipes expect **durability, high-pressure resistance, flexibility, and reliable performance**. Additionally, PE pipes should possess **excellent resistance to chemicals and corrosion**, a smooth inner surface for efficient flow, and conformity to **safe material standards for potable water**. For applications in both water supply and irrigation, it's also essential that these pipes can handle high tensile stress and internal pressure without deformation, ensuring a long operational lifespan.

IS 4984 is the Indian Standard specifying requirements for HDPE pipes intended for water supply. This standard addresses consumer expectations by defining **material specifications, dimensions, and essential mechanical properties** that ensure the pipes are durable and suitable for potable water use. It also categorizes pipes based on pressure ratings and grades, such as PE 63, PE 80, and PE 100, which specify their pressure-bearing capacities.

IS 4984 also includes **detailed testing procedures** covering parameters like tensile strength, elongation, and internal pressure resistance, which help verify the pipes' quality and durability. By adhering to this standard, HDPE pipes meet the reliability and performance needs expected in water supply and irrigation applications, offering a **sustainable, low-maintenance solution** with a long operational lifespan.