

## **\*\*Summary of Unplasticized PVC Pipes for Potable Water Supplies (IS 4985)\*\***

Unplasticized Polyvinyl Chloride (uPVC) pipes are rigid, durable pipes made from a type of PVC resin that does not contain plasticizers. These pipes are widely used for the transportation of potable (drinking) water due to their excellent corrosion resistance, low maintenance needs, and long service life. uPVC pipes are lightweight, cost-effective, and easy to install, making them a preferred choice for water supply systems in both urban and rural settings.

Consumers expect uPVC pipes used for potable water supplies to meet several key quality parameters. These include high strength to withstand internal pressure, resistance to chemical degradation, and the ability to maintain water quality without leaching harmful substances. The pipes must also be resistant to impact and cracking under both normal and extreme environmental conditions. Additionally, they should feature a smooth internal surface to prevent clogging and ensure a consistent flow of water. The pipes must be durable, reliable, and safe for long-term use in drinking water systems.

Indian Standard IS 4985 specifically addresses these consumer expectations by establishing detailed specifications for the manufacturing, testing, and performance of uPVC pipes for potable water. The standard defines the required physical properties such as tensile strength, impact resistance, and pressure endurance. It also includes guidelines for testing chemical resistance, low-temperature performance, and leaching of harmful substances, ensuring that the pipes do not contaminate the water. IS 4985 emphasizes quality control during production, ensuring pipes meet the necessary safety and reliability standards, thus ensuring the safe transport of potable water across India. By adhering to IS 4985, manufacturers can produce uPVC pipes that meet the stringent requirements for both performance and safety in potable water systems.