IS 2508:2024 Low Density Polyethylene Films (*Fourth Revision*)

Polyethylene films are extremely low permeability sheets/liners/geo-membrane used as a barrier to control liquid (fluid) or gas migration. The original use of polyethylene films is for water proofing of various structures in water management, waste management, agriculture and infrastructure. Polyethylene films are very popular since long due to their various unmatched property like flexibility, non-toxicity, wider width, high chemical resistance, impermeability, inert material, good weld ability and U.V. resistibility.

This Standard sets out specifications for four types of polyethylene films, primarily used in areas like agriculture, construction, water management, and waste management. The standard specifies requirements for product composition, such as low-density (LDPE) and high-density (HDPE) polyethylene types, and mandates standards for physical properties like thickness, strength, flexibility, and durability.

This standard was first published in 1963 and subsequently revised in 1977, 1984 and 2016. Current is the fourth version of the standard accounts the developments in the polyethylene resin manufacturing technologies and to aligns with the latest technology and trade practices.

Key tests include checking for thickness uniformity, tensile strength, tear resistance, and puncture resistance. It also defines sampling techniques and quality controls for manufacturers to follow, including packaging and labeling guidelines. Additionally, the document provides specifications for carbon black content, essential for UV protection in films intended for outdoor use. The revision aims to improve performance consistency, safety, and environmental suitability of polyethylene films in various applications.