IS 12254:2021 Polyvinylchloride (PVC) Industrial Boots — Specification

Polyvinyl chloride (PVC) boots are meant to protect feet, ankles and knees against rains during monsoon and while working in slushy area. Such boots are also recommended for light duty purpose in tanneries, food and beverage industries, sewage treatment plants, petrochemical, cement and pharmaceuticals industries, garbage disposal in municipal corporations and in building construction work, because polyvinyl chloride has very good resistance to water, alcohols, acids and alkalies. Such boots are having wide ranging operation including horticulture and agriculture in cold bound areas also. Polyvinyl chloride boots are not to be used in areas which are prone to fire and explosion. Such operations include mining, oil exploration, firefighting etc. PVC melts at 80-90 ºC and not fit for use in areas where heat generation and fire hazard is of major concern.

This standard, IS 12254:2021, outlines the requirements for Polyvinylchloride (PVC) industrial boots designed to protect workers' feet, ankles, and knees in various industrial settings.

The standard covers safety, protective, and occupational PVC footwear. These boots are classified by design (ankle boots or wellington/gum boots) and protection level:

- **Variety 1:** Safety footwear, incorporating features like toe caps for impact and compression resistance.
- **Variety 2:** Protective footwear offering protection against specific hazards.
- **Variety 3:** Occupational footwear for general industrial use.**:**

By defining these comprehensive requirements and testing protocols, the standard aims to ensure that PVC industrial boots provide reliable protection, durability, and safety for workers in diverse industrial environments.

- **Protection:** The boots should adequately protect against hazards specific to the working environment, including impact, compression, penetration, cuts, slips, and chemical exposure.
- **Durability:** The boots should withstand the rigours of industrial work, exhibiting sufficient tensile strength, abrasion resistance, and flexing resistance in both the upper and outsole components.
- **Comfort and Fit:** The boots should be ergonomically designed, offering a comfortable fit and ease of movement to minimize fatigue and discomfort during extended wear.
- **Safety:** The boots should be constructed with safe materials, free from harmful substances like excessive lead content, and incorporate safety features like slip resistance and leakproofness.