

Summary
**IS 14128 : 1994 - N-(1,3-Dimethylbutyl)-N-Phenylparaphenylenediamine (6 PPD) –
Specification**

The Indian Standard IS 14128, formulated by the Bureau of Indian Standards (BIS), specifies the quality and testing requirements for N-(1,3-Dimethylbutyl)-N-Phenylparaphenylenediamine, commonly known as 6 PPD. This compound is primarily used as an antioxidant in rubber manufacturing, especially in products such as tires, belts, and other rubber goods exposed to stress, oxidation, and environmental wear. By adhering to the quality benchmarks set by IS 14128, manufacturers can ensure product durability and performance in demanding applications.

This standard outlines the chemical and physical properties required for 6 PPD to be effective in its function as an antioxidant. Key specifications include purity requirements, which indicate that 6 PPD must meet a minimum percentage of the active ingredient to ensure efficacy in stabilizing rubber compounds. The standard details parameters such as melting point, ash content, and solubility, which are critical for determining the quality and compatibility of 6 PPD with rubber formulations.

The standard also provides guidelines on the testing methods to verify compliance with these specifications, ensuring consistency in product quality across different manufacturers. These tests include methods for identifying contaminants and confirming that the antioxidant properties of 6 PPD meet necessary durability criteria under heat, oxidation, and mechanical stress.

By following IS 14128, manufacturers can ensure that 6 PPD effectively prevents the degradation of rubber products, prolonging their life and enhancing safety, especially in critical applications like automotive tires. This standard thus supports the rubber industry by establishing a reliable framework for antioxidant quality, leading to durable and high-performing rubber products in the Indian market. Through IS 14128, BIS helps maintain consistent, safe, and reliable standards that benefit both manufacturers and end-users.