

## **Summary of IS 5591:2003– Chlorobenzene**

Indian Standard IS 5591:2003 outlines the specifications for chlorobenzene, a widely used industrial chemical. This standard is important for ensuring that the chlorobenzene produced, sold, or used in India meets specific quality and safety criteria. Chlorobenzene is commonly used in the manufacture of pesticides, pharmaceuticals, dyes, and other chemicals. The standard ensures that this substance is of high purity, making it suitable for its intended industrial applications.

The main focus of IS 5591:2003 is to set clear requirements for the chemical composition and physical properties of chlorobenzene. The standard defines acceptable limits for substances like water, free chlorine, and other organic contaminants, which could affect the quality and safety of the chemical. By controlling these impurities, the standard ensures that chlorobenzene remains effective and safe for use in various industrial processes.

The standard outlines specific methods for determining the purity of chlorobenzene, which includes testing for the presence of moisture, free chlorine, and other organic impurities. One of the key tests is the determination of water content, which is important because excess moisture can affect the stability and effectiveness of chlorobenzene in industrial processes. The test for free chlorine is also crucial, as chlorine impurities could interfere with chemical reactions, making the chlorobenzene unsuitable for certain applications.

Another important test described in the standard is for density and boiling point. These physical properties help ensure that the chlorobenzene meets the expected characteristics for its specific use. The appearance of the chemical is also assessed to verify that it is clear and colorless, as any discoloration could indicate contamination or degradation.

Additionally, the standard provides methods for assessing the flash point and viscosity of chlorobenzene. The flash point test ensures the chemical's flammability is within safe limits, which is vital for safe handling and storage. Viscosity is important for understanding how the liquid behaves in different applications, particularly in industrial machinery or chemical processes.

The standard also specifies packaging and labelling tests to ensure that the product is securely packaged and clearly labelled with all necessary safety and handling instructions. This is critical for preventing accidents during transportation and storage.

Overall, IS 5591:2003 helps maintain consistent quality, safety, and environmental standards for chlorobenzene. It is designed to protect consumers and industries by ensuring that this chemical is of a high standard, free from harmful impurities, and safe for its intended applications. This standard plays a key role in regulatory compliance and contributes to safe industrial practices across the country.

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