

IS 6971:1998

2 - Ethyl hexan - 1 - Ol - Specification

(First Revision)

The Indian Standard IS 6971:1998 outlines the specifications for 2-ethylhexan-1-ol, a versatile chemical compound used in various industrial applications. This standard defines two grades of the material: **Plasticizer Grade**, primarily used in the manufacturing of plasticisers for PVC and other polymers, and **Industrial Grade**, which finds applications in wetting agents, lacquer solvents, defoaming agents, and viscosity adjusters.

The standard prescribes several key test requirements to ensure the quality and suitability of 2-ethylhexan-1-ol for its intended purposes. These tests assess various characteristics of the material, including:

Colour: Measured in Hazen units, this test determines the material's clarity and freedom from suspended matter, ensuring its visual appeal and suitability for specific applications.

Relative Density: Determined by comparing the mass of the material to the mass of an equal volume of water at 27°C, this test verifies the material's density, which is crucial for its performance in various applications.

Distillation Range: This test establishes the initial boiling point and dry point of the material, ensuring its purity and consistency in terms of its boiling characteristics.

Water Content: Measured using the Karl Fischer method, this test determines the amount of moisture present in the material, ensuring it meets the required dryness standards for its intended use.

Acidity: Expressed as acetic acid, this test quantifies the material's acidity, which is important for its compatibility with other materials and its overall performance.

Aldehydes and Ketones: This test, expressed as the carbonyl group content, determines the presence of these chemical compounds, which can impact the material's stability and reactivity.

Sulphuric Acid Colour Test: This test assesses the colour change when the material is treated with concentrated sulphuric acid, indicating the presence of impurities and their potential impact on the material's quality.

Purity: Determined using gas chromatography, this test provides a quantitative measure of the material's purity, ensuring it meets the minimum requirement for its intended grade (99.0% for Plasticizer Grade and 98.0% for Industrial Grade).

The standard also outlines the sampling procedures, emphasizing random selection and careful handling to ensure representative samples. The conformity of a 2-ethylhexan-1-ol lot is assessed based on the compliance of the composite sample with all the specified requirements. This rigorous testing regimen ensures the reliability and consistency of 2-ethylhexan-1-ol, supporting its safe and effective use in a wide range of industrial processes.