

## IS 16113: 2013 Gamma Picoline – Specification

Gamma picoline, also known as 4-picoline, is a nitrogen-containing heterocyclic compound with the molecular formula  $C_6H_7N$ . It is distinguished by its pyridine ring, with the nitrogen atom located at the fourth position. Gamma picoline is primarily used as a chemical intermediate in the synthesis of a variety of organic compounds, making it a valuable building block in the production of specialty chemicals.

One of the key applications of gamma picoline is in the production of **4-vinylpyridine**, which is used in the manufacture of **polymers and copolymers**. 4-Vinylpyridine serves as an important monomer for materials such as adhesives, coatings, and rubber products, enhancing their **flexibility** and **adhesion** properties. This makes gamma picoline a crucial compound in industries that require high-performance materials.

Additionally, gamma picoline plays a significant role in the pharmaceutical sector, particularly in the synthesis of **isoniazid**, an essential antibiotic used to treat **tuberculosis** (TB). Isoniazid is highly effective against the bacteria responsible for TB and remains a cornerstone in TB therapy. The contribution of gamma picoline to the development of such life-saving drugs underscores its importance not only in industrial applications but also in healthcare.

To ensure the quality and consistency of gamma picoline, Indian standard **IS 16113** prescribe specific requirements for its **physicochemical properties**, including **purity** and the presence of impurities such as other isomeric forms of picoline, pyridine, and moisture content. The methods for **sampling** and **testing** these properties are also outlined in the standard to maintain product quality across various applications.