

IS 16113: 2013 Gamma Picoline – Specification

Gamma picoline, or 4-picoline, is a nitrogen-containing heterocyclic compound characterized by its pyridine ring with a nitrogen atom located at the fourth position. With the molecular formula C_6H_7N , gamma picoline is primarily utilized as a chemical intermediate in the synthesis of various organic compounds. Its unique structure allows it to participate in numerous chemical reactions, making it a valuable building block in the production of specialty chemicals.

One of the notable applications of gamma picoline is in the synthesis of 4-vinylpyridine, a compound widely used in the production of polymers and copolymers. 4-Vinylpyridine is a key monomer in the manufacture of various materials, including adhesives, coatings, and rubber products, due to its ability to enhance the properties of these materials, such as flexibility and adhesion.

Additionally, gamma picoline serves as an important precursor for the synthesis of isoniazid, a critical antibiotic used in the treatment of tuberculosis. Isoniazid is known for its effectiveness in combating the bacteria responsible for TB and has been a cornerstone in tuberculosis therapy since its discovery. The ability of gamma picoline to provide a pathway to such essential pharmaceuticals highlights its role not only in industrial applications but also in healthcare, contributing to the development of life-saving medications.

This standard prescribes the requirements and methods of sampling and test for Gamma Picoline. Various physico-chemical properties including purity and various impurities such as other isomeric forms of picoline, pyridine, moisture content, etc. and their test methods have been stipulated in the standard.