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About Diisononyl Phthalate

Vestinol® 9 DINP is a phthalate ester used mainly as a plasticizer. Plasticizers are substances added to plastics to increase their flexibility, transparency, durability, and longevity. They are primarily used to soften polyvinyl chloride.

History

The development of cellulose nitrate in 1846 led to the manufacture of castor oil which was patented in 1856 for use as the first plasticizer. In 1870, camphor became the more favored plasticizer for cellulose nitrate. Phthalates were first introduced in the 1920s and quickly replaced the volatile and odorous camphor. In 1931, the commercial availability of polyvinyl chloride and the development of di-2-ethylhexyl phthalate began the boom of the plasticizer PVC industry, the primary use of **Diisononyl Phthalate**, commonly referred to as DINP.

Properties

Phthalate esters are the dialkyl esters of phthalic acid. The name phthalate is derived from phthalic acid, which itself is derived from the word "naphthalene." When added to plastics, phthalates allow the long molecules to slide against one another. The phthalates have a clear liquid consistency and show low water solubility, low oil solubility and low volatility. The polar carboxyl group contributes little to the physical properties of the phthalates, except when R and R' are very small short chain moieties, such as ethyl or methyl groups. Phthalate esters are colorless, odorless, liquids produced by reacting phthalic anhydride with an appropriate alcohol (usually 6 to 13 carbon atoms in length).