

Polyvinyl Acetate

CAS: [9003-20-7]

DESCRIPTION

A clear, water white to pale yellow, solid resin prepared by the polymerization of vinyl acetate. After completion of polymerization, the resin is freed of traces of residual catalyst (usually a peroxide), monomer, and/or solvent by vacuum drying, steam sparging, washing, or any combination of these treatments. The resin is soluble in acetone, but is insoluble in water.

Functional Use in Foods Masticatory substance in chewing gum base.

REQUIREMENTS

Identification The sample is melted and prepared for analysis on a potassium bromide plate. The infrared absorption spectrum of the sample exhibits maxima at the same wavelengths as the typical spectrum, as shown in the section on *Infrared Spectra (Series C: Other Substances)*.

Free Acetic Acid Not more than 0.05%.

Heavy Metals (as Pb) Not more than 0.002%.

Lead Not more than 3 mg/kg.

Loss on Drying Not more than 1.0%.

Molecular Weight Not less than 2000.

TESTS

Free Acetic Acid Transfer 10.0 g of the sample into a 250-mL, glass-stoppered Erlenmeyer flask, dissolve in 75 mL of ethylene dichloride, add 60 mL of specially denatured ethanol formula 2B, and mix. Add phenolphthalein TS, and titrate with 0.02 N methanolic potassium hydroxide to a faint pink endpoint. Perform a blank determination (see *General Provisions*), and make any necessary correction. Each mL of 0.02 N methanolic potassium hydroxide is equivalent to 1.201 mg of $C_2H_4O_2$.

Heavy Metals Prepare and test a 1-g sample as directed in *Method II* under the *Heavy Metals Test*, Appendix IIIB, using 20 μg of lead ion (Pb) in the control (*Solution A*).

Lead Prepare a *Sample Solution* as directed in the general method under *Chewing Gum Base*, Appendix IV. This solution meets the requirements of the *Lead Limit Test*, Appendix IIIB, using 10 μg of lead ion (Pb) in the control.

Loss on Drying Dry a sample of about 1.5 g at 100° for 2 h in vacuum as directed under *Loss on Drying*, Appendix IIC.

Molecular Weight Determine as directed in the general method, Appendix IV.

Packaging and Storage Store in well-closed containers.