

Isobutylene–Isoprene Copolymer

Butyl Rubber

CAS: [9010-85-9]

DESCRIPTION

A synthetic copolymer containing from 0.5 to 2.0 molar percent of isoprene, the remainder, respectively, consisting of isobutylene. It is prepared by copolymerization of isobutylene and isoprene in methyl chloride solution, using aluminum chloride as the catalyst. After completion of polymerization, the rubber particles are treated with hot water containing a suitable food-grade deagglomerating agent, such as stearic acid. Finally, the coagulum is dried to remove residual volatiles.

Functional Use in Foods Masticatory substance in chewing gum base.

REQUIREMENTS

Identification Identify Isobutylene–Isoprene Copolymer by comparing its infrared absorption spectrum with a typical spectrum as shown in the section on *Infrared Spectra (Series C: Other Substances)*. Prepare the sample by dissolving it in hot toluene and evaporating on a potassium bromide plate.

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

Lead Not more than 3 mg/kg.

Total Unsaturation Not more than 2.0%, as isoprene.

TESTS

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.

Total Unsaturation Determine as directed in the general method, Appendix IV.

Packaging and Storage Store in well-closed containers.