

Abstract

Flame-retardant Antimicrobial Agent, Preparation Method therefor and Use thereof, and Flame-retardant Antimicrobial Thermoplastic Resin Composition

Disclosed are a flame-retardant antimicrobial agent, a preparation method therefor and the use thereof, and a flame-retardant antimicrobial thermoplastic resin composition. The flame-retardant antimicrobial agent is a polymer microsphere with the surface grafted thereof with a guanidine salt, wherein the polymer microsphere comprises a cross-linked structure composed of a structural unit A derived from maleic anhydride, a structural unit B derived from a monomer M, and a structural unit C derived from a cross-linking agent. The monomer M is selected from a C₄-C₉ aliphatic olefin or a mixture thereof, and the guanidine salt comprises at least one guanidine salt having the property of flame resistance. The flame-retardant antimicrobial agent has both a good antimicrobial effect and a good flame-retardant effect, is an effective single-component multifunctional auxiliary, has a very good flame-retardant and antimicrobial efficiency, and also has a good dispersion, a good fluidity, and a low moisture absorption. A flame-retardant antimicrobial thermoplastic resin composition comprising the flame-retardant antimicrobial agent also has a good flame-retardant and antimicrobial performance and a good overall performance.

[No Suitable Figure]