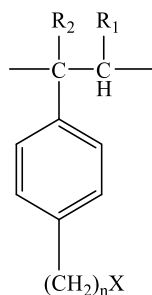
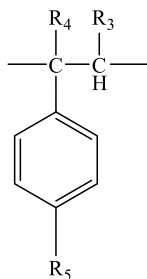


Abstract

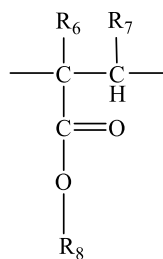
The present invention relates to the technical field of rubber preparation, and disclosed are a multi-component copolymer, a preparation method therefor, and use thereof, and a halogenated branched butyl rubber, a preparation method therefor, and use thereof. The multi-component copolymer comprises: a structural unit A, a structural unit B, and a structural unit C, wherein the structural unit A has a phase structure represented by formula (1), the structural unit B has a phase structure represented by formula (2), and the structural unit C has a phase structure represented by formula (3); wherein R_1 , R_2 , R_3 , R_4 , R_5 , R_6 , R_7 and R_8 are each independently hydrogen or a C_1 - C_{10} phase linear chain or branched alkyl; X is halogen, and n is any integer of 1 to 10; the phase tail end of the multi-component copolymer contains a phase structural unit from a conjugated diene. According to the present invention, the halogenated branched butyl rubber is prepared by taking the multi-component copolymer as a grafting agent, so that an effective damping temperature range and the phase stability of the damping performance of the halogenated branched butyl rubber are improved.



Formula (1)



Formula (2)



Formula (3).