

Abstract

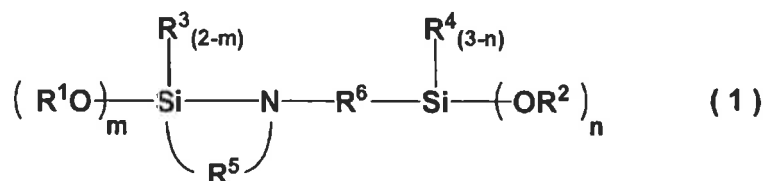
METHOD FOR PRODUCING MODIFIED CONJUGATED DIENE POLYMER,
MODIFIED CONJUGATED DIENE POLYMER, MODIFIED CONJUGATED
DIENE POLYMER COMPOSITION, RUBBER COMPOSITION AND TIRE

A method for producing a modified conjugated diene polymer comprising

a polymerization step of obtaining a conjugated diene polymer containing a nitrogen atom in a polymer chain and an active end by copolymerizing a conjugated diene compound and a nitrogen atom-containing vinyl compound, or a conjugated diene compound, an aromatic vinyl compound and a nitrogen atom-containing vinyl compound by use of an alkali metal compound and/or an alkaline earth metal compound as a polymerization initiator, and

a modification step of reacting a modifier, which is a compound represented by the following formula (1), with the active end of the conjugated diene polymer:

[Formula 1]



where R¹ to R⁴ each independently represent an alkyl group having 1 to 20 carbon atoms or an aryl group having

6 to 20 carbon atoms; R^5 represents an alkylene group having 3 to 10 carbon atoms; R^6 represents an alkylene group having 1 to 20 carbon atoms; m is an integer of 1 or 2; and n is an integer of 2 or 3.