wherein R^{41} represents an alkyl group, an alkenyl group, a cycloalkenyl group or an aryl group, M represents a silicon atom or a tin atom, L represents a halogen atom or a hydrocarbyloxy group, and a represents an integer of 0 to 2.

Examples of the coupling agent represented by the formula (4) include silicon tetrachloride, methyltrichlorosilane, dimethyldichlorosilane, ~~trimethylchlorosilane,~~ tin tetrachloride, methyltrichlorotin, dimethyldichlorotin, ~~trimethylchlorotin,~~ tetramethoxysilane, methyltrimethoxysilane, dimethoxydimethylsilane, methyltriethoxysilane, ethyltrimethoxysilane, dimethoxydiethylsilane, diethoxydimethylsilane, tetraethoxysilane, ethyltriethoxysilane, and diethoxydiethylsilane.

The addition amount of the coupling agent is preferably 0.03 mol or more, more preferably 0.05 mol or more per 1 mol of the organometallic compound used in polymerization. The addition amount is preferably 0.4 mol or less, more preferably 0.3 mol or less.

In the conjugated diene-based polymer, an active end of a polymer chain may be inactivated with an alcohol or the like. Examples of an inactivating method include a method of adding an alcohol to a polymerization solution obtained by polymerizing a monomer component containing the conjugated diene-based compound and the compound represented by the formula (1). As the alcohol, methanol and 1-butanol can be used.

A conjugated diene-based polymer obtained by polymerization in a hydrocarbon solvent may be a polymer recovered from a polymerization solution. When the conjugated diene-based polymer is recovered from the polymerization solution, the conjugated diene-based polymer can be recovered from the polymerization solution by a known method such as a method of adding a coagulating agent to the polymerization solution or a method of adding steam to the polymerization solution. The recovered conjugated diene-based polymer may be dried with a known drier such as a