CLAIMS

1. A modified conjugated diene-based polymer comprising: a first chain comprising a repeating unit derived from a conjugated diene-based monomer; a second chain comprising a derived unit from a macromonomer; and a derived unit from an aminoalkoxysilane-based modifier,
wherein the first chain and the second chain is a coupled and combined structure via the derived unit from a modifier,
wherein the macromonomer comprises a repeating unit derived from a N-functional group-containing monomer,
wherein a rate of change of molecular weight distribution calculated by the following Mathematical Formula 1 is 10% or less:
[Mathematical Formula 1]
Molecular weight distribution increasing rate (%) = $[(|PDI_2-PDI_1|)/PDI_1]\times100$
in Mathematical Formula 1,
PDI_1 is molecular weight distribution of the polymer before standing, and PDI_2 is molecular weight distribution of the polymer after standing for 90 days at 25°C.

2. The modified conjugated diene-based polymer of claim 1, wherein a rate of change of mooney viscosity calculated by the following Mathematical Formula 2 is 10% or less:
[Mathematical Formula 2]
Mooney viscosity increasing rate (%) = $[|(MV_2-MV_1)|]/MV_1]\times100$
in Mathematical Formula 2,
MV_1 is mooney viscosity measured at 100°C of the polymer before standing, and MV_2 is mooney viscosity measured at 100°C of the polymer after standing for 90 days at 25°C.

3. The modified conjugated diene-based polymer of claim 1, wherein the macromonomer further comprises a repeating unit derived from a conjugated diene-based monomer.

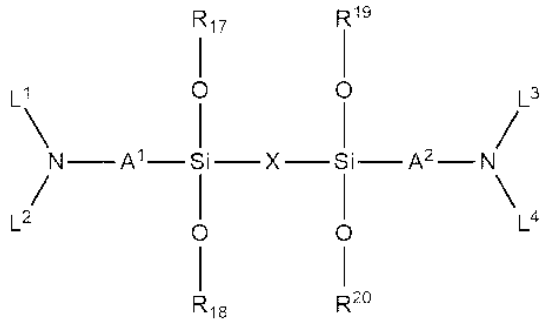
4. The modified conjugated diene-based polymer of claim 1, comprising a Si atom,
wherein the Si content is 100 ppm or more based on a total weight of the polymer.

5. The modified conjugated diene-based polymer of claim 1, comprising a N atom,
wherein the N content is 70 ppm or more based on a total weight of the polymer.

6. The modified conjugated diene-based polymer of claim 1, wherein the

aminoalkoxysilane-based modifier is one or more selected from compounds represented by the following Formula 1 to Formula 3:

[Formula 1]



in Formula 1,

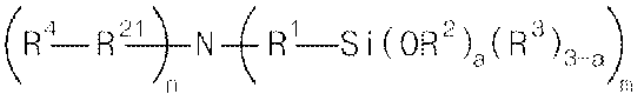
A^1 and A^2 are each independently an alkylene group of 1 to 20 carbon atoms,

R^{17} to R^{20} are each independently an alkyl group of 1 to 20 carbon atoms

L^1 to L^4 are each independently a mono-substituted, di-substituted or tri-substituted alkylsilyl group with alkyl groups of 1 to 10 carbon atoms, or an alkyl group of 1 to 20 carbon atoms, and

X is an oxygen atom, or an alkylene group of 1 to 20 carbon atoms,

[Formula 2]



in Formula 2,

R^1 is a single bond, or an alkylene group of 1 to 10 carbon atoms,

R^2 and R^3 are each independently an alkyl group of 1 to 10 carbon atoms,

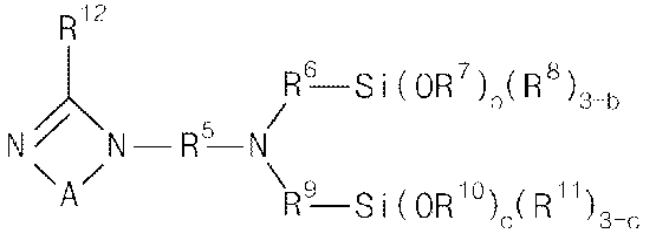
R^4 is hydrogen, an epoxy group, an alkyl group of 1 to 10 carbon atoms, an allyl group of 3 to 10 carbon atoms, a mono-substituted, di-substituted or tri-substituted alkylsilyl group with alkyl groups of 1 to 10 carbon atoms, or a heterocyclic group of 2 to 10 carbon atoms,

R^{21} is a single bond, an alkylene group of 1 to 10 carbon atoms, or $-[R^{42}O]_j-$, where R^{42} is an alkylene group of 1 to 10 carbon atoms, and j is an integer selected from 1 to 30,

a and m are each independently an integer selected from 1 to 3, and

n is an integer of 0 to 2,

[Formula 3]



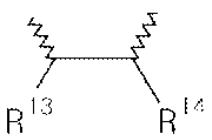
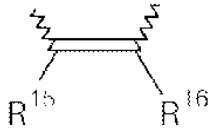
in Formula 3,

R^5, R^6 and R^9 are each independently an alkylene group of 1 to 10 carbon atoms,

R^7, R^8, R^{10} and R^{11} are each independently an alkyl group of 1 to 10 carbon atoms,

R^{12} is hydrogen or an alkyl group of 1 to 10 carbon atoms,

b and c are each independently 1, 2 or 3, where $b+c \geq 4$ is satisfied, and

A is  or , where R^{13}, R^{14}, R^{15} and R^{16} are each independently hydrogen or an alkyl group of 1 to 10 carbon atoms.

7. The modified conjugated diene-based polymer of claim 1, further comprising a repeating unit derived from an aromatic vinyl-based monomer.

8. A rubber composition comprising the modified conjugated diene-based polymer of claim 1; and a filler.

9. The rubber composition of claim 8, wherein the filler is one or more selected from a silica-based filler and a carbon black-based filler.