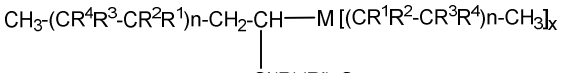
CLAIMS

1. A process to form a composition comprising a siloxane modified olefin-based polymer, said process comprising reacting A) with B), each as shown below, to form C) as shown below:

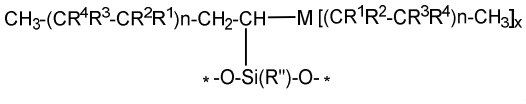
A) M[(CR1R2-CR3R4)n-CH3]x where M is a metal selected from Zn or Al; x is 2 or 3, and if x =2, then M is Zn, and if x =3, then M is Al; each n is independently ≥ 1; and for each respective n value, each of R1, R2, R3, R4 is independently H or a hydrocarbyl; and R1 may or may not be the same for each successive repeat unit; R2 may or may not be the same for each successive repeat unit; R3 may or may not be the same for each successive repeat unit; R4 may or may not be the same for each successive repeat unit;

B) a polysiloxane comprising at least one silyl vinyl group;

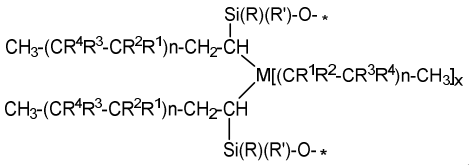
C) to form one or more polysiloxane-M-polymer complexes, each independently selected from *i, ii, iii, iv, v, vi, vii, viii, ix or x*:

i) 

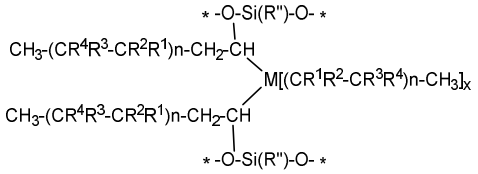
, where each n is defined above, and each respective unit of R1, R2, R3, R4 is defined above; and each of R and R' is independently a hydrocarbyl or a heterohydrocarbyl; x =1 or 2, and if x =1, then M is Zn, and if x = 2, then M is Al; and the asterisk (*) represents the remainder of the complex;

ii) 

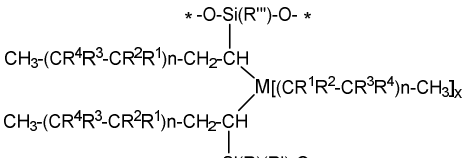
, where each n is defined above, and each respective unit of R1, R2, R3, R4 is defined above; and R" is a hydrocarbyl or a heterohydrocarbyl; x = 1 or 2, and if x =1, then M is Zn, and if x = 2, then M is Al; and each asterisk (*) independently represents the respective remainder of the complex;

iii) 

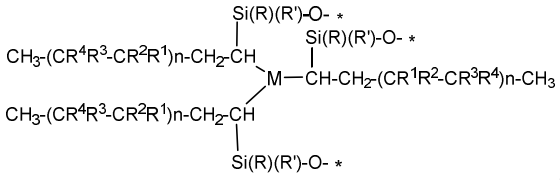
, where each n is defined above, and each respective unit of R1, R2, R3, R4 is defined above; and each of R and R' is independently a hydrocarbyl or a heterohydrocarbyl; x = 0 or 1, and if x = 0 (the [(CR1R2-CR3R4)n-CH3]) moiety is not present), then M is Zn, and if x = 1, then M is Al; and each asterisk (*) independently represents the respective remainder of the complex;

iv) 

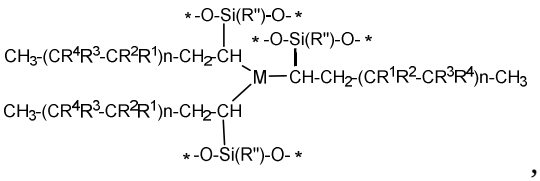
, where each n is defined above, and each respective unit of R1, R2, R3, R4 is defined above; and each R" is independently a hydrocarbyl or a heterohydrocarbyl; x = 0 or 1, and if x = 0 (the [(CR1R2-CR3R4)n-CH3]) moiety is not present), then M is Zn, and if x = 1, then M is Al; and each asterisk (*) independently represents the respective remainder of the complex;

v) 

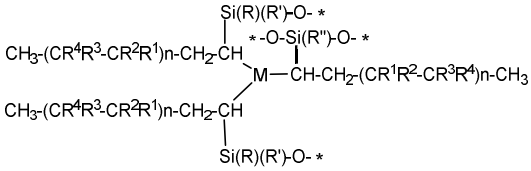
, where each n is defined above, and each respective unit of R1, R2, R3, R4 is defined above; and each of R, R' and R" is independently a hydrocarbyl or a heterohydrocarbyl; x = 0 or 1, and if x = 0 (the [(CR1R2-CR3R4)n-CH3]) moiety is not present), then M is Zn, and if x = 1, then M is Al; and each asterisk (*) independently represents the respective remainder of the complex;

vi) 

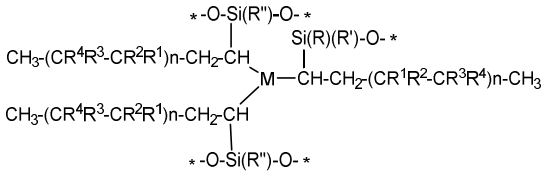
, where each n is defined above, and each respective unit of R1, R2, R3, R4 is defined above; and each of R and R' is independently a hydrocarbyl or a heterohydrocarbyl; and M is Al; and each asterisk (*) independently represents the respective remainder of the complex;

vii) 

, where each n is defined above, and each respective unit of R1, R2, R3, R4 is defined above; and each R" is independently a hydrocarbyl or a heterohydrocarbyl; and M is Al; and each asterisk (*) independently represents the respective remainder of the complex;

viii) 

, where each n is defined above, and each respective unit of R1, R2, R3, R4 is defined above; and each of R, R' and R" is independently a hydrocarbyl or a heterohydrocarbyl; and M is Al; and each asterisk (*) independently represents the respective remainder of the complex;

ix) 

, where each n is defined above, and each respective unit of R1, R2, R3, R4 is defined above; and each of R, R' and R" is independently a hydrocarbyl or a heterohydrocarbyl; and M is Al; and each asterisk (*) independently represents the respective remainder of the complex; or

x) any combination thereof;

hydrolyzing the one or more polysiloxane-M polymer complexes (C) to form the siloxane modified olefin-based polymer.

2. The process of claim 1, wherein, independently, for *i, iii, v, vi, viii, ix*, each of R and R' is independently an alkyl group or a vinyl group.

3. The process of claim 1 or claim 2, wherein, independently, for *i-ix*, for each respective n value, each of R1, R2, R3, R4 is independently H or an alkyl group.

4. The process of any one of claims 1-3, wherein, independently, for *ii, iv, v, vii, viii, ix*, each R" is independently an alkyl group or a vinyl group.

5. The process of any one of claims 1-4, wherein M is Al.

6. The process of any one of claims 1-5, wherein the siloxane modified olefin-based polymer comprises the following polymeric segments *a1 and/or a2*, and *b* as follows:

a1) -O-Si(R)(R')-CH2-CH2-(CR1R2-CR3R4)n-CH3, where n is defined herein; and each of R, R' is defined herein; and each of R1, R2, R3, R4 is defined herein;

a2) -O-Si(R")-CH2-CH2-((CR1R2-CR3R4)n-CH3)-, where n is defined herein; and R" is defined herein; and each of R1, R2, R3, R4 is defined herein;

b) -(O-SiR'"(R""))m-, where m ≥ 1, and for each value of m, each of R'"and R"" is independently an H or a hydrocarbyl.

7. The process of claim 6, wherein, for segment *b*, each of R’” and R”” is independently an H or an alkyl group.

8. The process of any one of claims 1-7, wherein the process further comprises isolating “the composition comprising the siloxane modified olefin-based polymer.”

9. The process of any one of claims 1-8, wherein the composition further comprises an olefin-based polymer.

10. A composition formed by the process of any one of claims 1-9.