Claims:

We claim:

1. A composition comprising: (i) a reaction product of at least one non-hydrolytic oxygen-containing compound and at least one hydrocarbyl aluminum; and (ii) an aliphatic hydrocarbon fluid, wherein the molar ratio of aluminum to non-hydrolytic oxygen in the composition is greater than or equal to 1.5, wherein the reaction product has a first set of signals in an ^{1}H Nuclear Magnetic Resonance spectrum in a region from 4.5 ppm to 5.1 ppm and a second set of signals in an ^{1}H Nuclear Magnetic Resonance spectrum in a region from 5.1 ppm to 6.5 ppm wherein, the ratio of the first set of signals to the second set of signals is greater than or equal to 2.8, wherein the composition comprises from 1 wt% to 50 wt% of the aliphatic hydrocarbon fluid based on the total weight of the composition; and

wherein the at least one non-hydrolytic oxygen-containing compound comprises methacrylic acid and the at least one hydrocarbyl aluminum comprises trimethyl aluminum.

2. A process to prepare an alumoxane precursor, comprising:

forming a solution by, in an aliphatic hydrocarbon fluid, combining at least one hydrocarbyl aluminum with at least one non-hydrolytic oxygen-containing compound, wherein the at least one non-hydrolytic oxygen-containing compound comprises methacrylic acid and the at least one hydrocarbyl aluminum comprises trimethyl aluminum;

wherein the molar ratio of aluminum to non-hydrolytic oxygen in the solution is greater than or equal to 1.5, wherein the aliphatic hydrocarbon fluid has a boiling point of less than 70 degrees Celsius, and wherein the combining is conducted at the reflux temperature of the aliphatic hydrocarbon fluid; and

distilling the solution at a pressure of greater than 0.5 atm to form the alumoxane precursor, wherein the precursor comprises from 0 wt% to 50 wt% of the aliphatic hydrocarbon fluid based on the total weight of the precursor.

3. The composition of claim 1 or the process of claim 2, wherein the composition or the precursor comprises from 1 wt% to 20 wt% of the aliphatic hydrocarbon fluid based on the total weight of the composition.

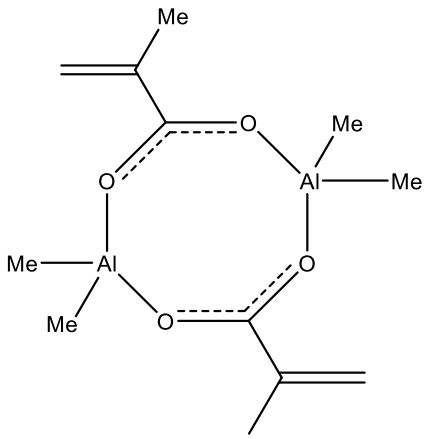
4. The composition of claim 1 or 3 or the process of claim 2 or 3, wherein the aliphatic hydrocarbon fluid is a C_3 to C_{12} alkane.

5. The process of any of claims 2-4, wherein the at least one non-hydrolytic oxygen-containing compound comprises methacrylic acid, the at least one hydrocarbyl aluminum comprise trimethylaluminum and the aliphatic hydrocarbon fluid is pentane, and the solution is prepared by addition of a solution of the methacrylic acid in pentane to a solution of the trimethylaluminum in pentane at a rate sufficient to maintain a controlled reflux, that is, maintaining the reaction temperature at the boiling point of pentane (about 36.1 degrees Celsius).

6. A composition comprising: a support material including a plurality of particles coated with the composition of any of claims 1 or 3-5.

7. The composition of claim 6, further comprising a catalyst compound.

8. A composition, wherein the composition comprises a compound represented by the Formula (**III**):



(**III**).