What is claimed is:

1. A process for preparing an additive comprising the steps of:

(1) reacting a polymer derived from of an olefin containing 2 to 8 carbon atoms with an acylating agent to form an acylated polymer; and

(2) reacting the acylated polymer of step (1) in a medium substantially free of to free of sulphur with:

a. ammonia or an amine to form a succinimide product; or

b. water to form a hydrolysed product,

wherein the mole ratio of the acylating agent to polymer in step (1) is from 0.3:1 to 1.6:1.

2. The process of claim 1, wherein the mole ratio of acylating agent to polymer is 1:1 to 1.4:1.

3. The process of claim 1, wherein the acylated polymer of step (1) contains 60 wt % or more as a mono-substituted acylated polymer.

4. The process of claim 1, wherein the polymer in step (1) contains less than 20 mole % of unreacted polymer.

5. The process of claim 1, wherein the polymer has a number average molecular weight of 450 to 2500.

6. The process of claim 1, wherein the olefin contains 3 to 6 carbon atoms.

7. The process of claim 1, wherein the polymer contains a vinylidene group present on 60 % or more of the polymer molecules.

8. The process of claim 1, wherein the acylating agent is an alpha, beta-unsaturated mono- or polycarboxylic acid, anhydride, ester or derivative thereof.

9. The process of claim 1, wherein the amine contains one or more primary or secondary amino groups.

10. The process of claim 1, wherein the medium has a sulphur content on a weight basis below 25 ppm.

11. The process of claim 1, wherein the medium has a flash point of 105°C or higher.

12. A composition comprising:

(a) a medium substantially free of to free of sulphur; and

(b) an additive containing an acylating group and a polymer derived from of an olefin containing 2 to 8 carbon atoms,

wherein the additive has a mole ratio of acylating group to polymer of 0.3:1 to 1.6:1.

13. A method of imparting at least one of detergency, dispersancy, corrosion inhibition or corrosion reduction to a liquid fuel or lubricating composition, the method comprising lubricating or fueling with a composition comprising:

(a) a medium substantially free of to free of sulphur;

(b) an additive containing an acylating agent and a polymer derived from of an olefin containing 2 to 8 carbon atoms; and

(c) a liquid fuel or an oil of lubricating viscosity,

wherein the additive has a mole ratio of acylating agent to polymer of 0.3:1 to 1.6:1.

The Claims defining the invention are as follows:

1. A process for preparing an additive comprising the steps of:

   (1) reacting a polymer derived from an olefin containing 2 to 8 carbon atoms with an acylating agent to form an acylated polymer, wherein the acylating agent is an alpha, beta-unsaturated mono- or polycarboxylic acid, anhydride, ester or derivative thereof; and

   (2) reacting the acylated polymer of step (1) with ammonia or an amine in a medium that is an aliphatic hydrocarbon oil of lubricating viscosity having a sulphur content of less than 25 ppm and a flash point of 105 °C or higher to form a succinimide product;

   wherein the mole ratio of the acylating agent to polymer in step (1) is from 1:1 to 1.4:1 and the reaction is carried out in the absence of the halogen chlorine;

   wherein the acylated polymer in step (1) contains less than 20 mole % of unreacted polymer;

   wherein the acylated polymer of step (1) contains 60 wt % or more as a mono-substituted acylated polymer; and

   wherein the ratio of amine nitrogen groups to acylated polymer carbonyl groups of the succinimide product is 1.3:1 to 2.7:1.

2. The process of claim 1, wherein the polymer has a number average molecular weight of 450 to 2500.

3. The process of claim 1, wherein the olefin contains 3 to 6 carbon atoms.

4. The process of claim 1, wherein the polymer contains a vinylidene group present on 60 % or more of the polymer molecules.

5. The process of claim 1, wherein the amine contains one or more primary or secondary amino groups.

6. The method of claim 1, wherein the medium substantially free of to free of sulphur has a sulphur content of less than 4 ppm.

7. A composition comprising:

(a) a medium that is an aliphatic hydrocarbon of lubricating viscosity having a sulphur content of less than 25 ppm and a flash point of 105 °C or higher; and

(b) an additive prepared according to a process comprising the steps of:

(1) reacting a polymer derived from an olefin containing 2 to 8 carbon atoms with an acylating agent to form an acylated polymer, wherein the acylating agent is an alpha, beta-unsaturated mono- or polycarboxylic acid, anhydride, ester or derivative thereof; and

(2) reacting the acylated polymer of step (1) with ammonia or an amine in the medium to form a succinimide product;

wherein the mole ratio of the acylating agent to polymer in step (1) is from 1:1 to 1.4:1 and the reaction of step (1) is carried out in the absence of the halogen chlorine;

wherein the acylated polymer in step (1) contains less than 20 mole % of unreacted polymer;

wherein the acylated polymer of step (1) contains 60 wt % or more as a mono-substituted acylated polymer; and

wherein the ratio of amine nitrogen groups to acylated polymer carbonyl groups of the succinimide product is 1.3:1 to 2.7:1.

8. A method of imparting at least one of detergency, dispersancy, corrosion inhibition or corrosion reduction to a liquid fuel or lubricating composition, the method comprising adding to said liquid fuel or lubricating composition a composition comprising:

(a) a medium that is an aliphatic hydrocarbon of lubricating viscosity having a sulphur content of less than 25 ppm and a flash point of 105 °C or higher;

(b) an additive prepared according to a process comprising the steps of:

(1) reacting a polymer derived from an olefin containing 2 to 8 carbon atoms with an acylating agent to form an acylated polymer, wherein the acylating agent is an alpha, beta-unsaturated mono- or polycarboxylic acid, anhydride, ester or derivative thereof; and

(2) reacting the acylated polymer of step (1) with ammonia or an amine in ft the medium to form a succinimide product;

wherein the mole ratio of the acylating agent to polymer in step (1) is from 1:1 to 1.4:1 and the reaction of step (1) is carried out in the absence of the halogen chlorine;

wherein the acylated polymer in step (1) contains less than 20 mole % of unreacted polymer;

wherein the acylated polymer of step (1) contains 60 wt % or more as a mono-substituted acylated polymer; and

wherein the ratio of amine nitrogen groups to acylated polymer carbonyl groups of the succinimide product is 1.3:1 to 2.7:1; and

(c) a liquid fuel or an oil of lubricating viscosity.

9. A fuel composition comprising a fuel and a fuel additive prepared by:

(1) reacting a polymer derived from an olefin containing 2 to 8 carbon atoms with an acylating agent to form an acylated polymer, wherein the acylating agent is an alpha, beta-unsaturated mono- or polycarboxylic acid, anhydride, ester or derivative thereof; and

(2) reacting the acylated polymer of step (1) with ammonia or an amine in a medium that is an aliphatic hydrocarbon oil of lubricating viscosity having a sulphur content of less than 25 ppm and a flash point of 105 °C or higher to form a succinimide product;

wherein the mole ratio of the acylating agent to polymer in step (1) is from 1:1 to 1.4:1 and the reaction is carried out in the absence of the halogen chlorine;

wherein the acylated polymer in step (1) contains less than 20 mole % of unreacted polymer;

wherein the acylated polymer of step (1) contains 60 wt % or more as a mono-substituted acylated polymer; and

wherein the ratio of amine nitrogen groups to acylated polymer carbonyl groups of the succinimde product is 1.3:1 to 2.7:1.

10. The fuel composition of claim 9, wherein the medium substantially free of to free of sulphur has a sulphur content of less than 4 ppm.