CLAIMS

1. A lubricating oil, comprising

a) at least two base stocks;

b) a first base having a viscosity greater than 40 cSt, Kv100°C and the first base stock having a molecular weight distribution (MWD) as a function of viscosity at least 10 percent less than algorithm

MWD = 0.2223 + 1.0232* log (Kv at 100°C in cSt);

c) a second base stock with a viscosity less than 10 cSt, Kv100°C.

2. The lubricating oil of claim 1 wherein the viscosity difference between the first and the second base stocks is greater than 30 cSt, Kv100°C .

3. The lubricating oil of claim 1 wherein the first base stock is a metallecene catalyzed PAO base stock.

4. The lubricating oil of claim 1 wherein the second base stock is chosen from the group consisting of GTL lubricants, wax derived lubricants, Poly-Alpha-Olefin (PAO), Brightstocks, Brightstocks with PIB, Group I base stocks, group II base stocks, group III base stocks, and any combination thereof.

5. The lubricating oil of claim 1 further comprising at least one additive, the additive chosen from the group consisting of antiwear, antioxidant, defoamant, demulsifier, detergent, dispersant, metal passivator, friction reducer, rust inhibitor, and any combination thereof.

6. The lubricating oil of claim 1 further comprising a third base stock.

7. The lubricating oil of claim 6, wherein the third base stock is chosen from a group consisting of a PAO with a viscosity of at least 6 cSt, Kv100°C and no more than 100 cSt, Kv100°C, ester base stock, alkylated aromatic and any combination thereof.

8. The lubricating oil of claim 6 wherein the first base stock has a viscosity greater than 300 cSt, Kv100°C.

9. The lubricating oil of claim 1 further comprising at a third and fourth base stock, the third base stock comprising a PAO having a viscosity of at least 6 cSt and less than 100 cSt, Kv100°C, the fourth base stock comprising an alkylated aromatic base stock.

10. The lubricating oil of claim 1 wherein the second base stock has a viscosity greater than 1.5 and less than 6 cSt, Kv100°C

11. The lubricating oil of claim 1 wherein the viscosity difference between the first base stock and the second base stock is greater than 96 cSt, Kv100°C.

12. The lubricating oil of claim 1 wherein the first base stock has a molecular weight distribution less than algorithm:

MWD = 0.41667 + 0.725 * log (Kv at 100°C in cSt).

13. A lubricating oil, comprising

a) at least two base stocks;

b) a first base stock comprising a metallocene catalyzed PAO with a viscosity greater than 40 cSt, Kv100°C;

c) a second base stock comprising a oil with a viscosity less than 10 cSt, Kv100°C.

14. The lubricating oil of claim 13 wherein the first base stock is greater than 300 cSt, Kv100°C.

15. The lubricating oil of claim 13 wherein the first base stock has a molecular weight distribution (MWD) as a function of viscosity at least 10 percent less than algorithm

MWD = 0.2223 + 1.0232* log (Kv at 100°C in cSt).

16. The lubricating oil of claim 13 wherein the second base stock has a viscosity greater than 1.5 cSt, Kv100°C.

17. The lubricating oil of claim 13 further comprising an alkylated aromatic and an additive package.

18. The lubricating oil of claim 13 wherein the first base stock has a molecular weight distribution less than algorithm:

MWD = 0.41667 + 0.725 * log (Kv at 100°C in cSt).

19. The lubricating oil of claim 13 wherein the second base stock is chosen from the group consisting of GTL lubricants, wax derived lubricants, Poly Alpha Olefin, Brightstocks, Brightstocks with PIB, Group I base stocks, group II base stocks, group III base stocks, and any combination thereof.

20. The lubricating oil of claim 13 further comprising an additive, the additive chosen from the group consisting of antiwear, antioxidant, defoamant, demulsifier, detergent, dispersant, metal passivator, friction reducer, rust inhibitor, and any combination thereof.

21. The lubricating oil of claim 13 further comprising at least one additive chosen to obtain favorable lubricant properties from the group consisting of micropitting, air release, pour point, low temperature viscosity, pour point, shear stability, lower oil operating temperature, energy efficiency and any combination thereof.

22. The lubricating oil of claim 13 wherein the viscosity difference between the first base stock and the second base stock is greater than 30 cSt, Kv100°C.

23. The lubricating oil of claim 13 wherein the viscosity difference between the first base stock and the second base stock is greater than 96 cSt, Kv100°C.

24. A method of blending a lubricating oil, comprising,

a) obtaining a first synthetic base stock lubricant the first base stock having a viscosity greater than 40 cSt, Kv100°C and the first bases stock having a molecular weight distribution (MWD) as a function of viscosity at least 10 percent less than algorithm

MWD = 0.2223 + 1.0232* log (Kv at 100°C in cSt);

b) obtaining a second synthetic base stock lubricant, the second base stock lubricant has a viscosity less than 10 cSt, Kv100°C;

c) mixing the first and second base stock lubricant to produce the lubricating oil.

25. The lubricating oil of claim 24 wherein the viscosity difference between the first and the second base stocks is greater than 30 cSt, Kv100°C .

26. The lubricating oil of claim 24 wherein the high viscosity base stock is a metallocene catalyzed PAO base stock.

27. The lubricating oil of claim 24 wherein the second base stock is chosen from the group consisting of GTL lubricants, wax derived lubricants, Poly Alpha Olefin, Brightstocks, Brightstocks with PIB, group I base stocks, group II base stocks, group III base stocks, and any combination thereof.

28. The lubricating oil of claim 24 further comprising at least one additive, the additive chosen from the group consisting of antiwear, antioxidant, defoamant, demulsifier, detergent, dispersant, metal passivator, friction reducer, rust inhibitor, and any combination thereof.

29. The lubricating oil of claim 24 further comprising a third base stock.

30. The lubricating oil of claim 29, wherein the third base stock is chosen from a group consisting of a PAO with a viscosity of at least 6 cSt, Kv100°C and no more than 100 cSt, Kv100°C, ester base stock, alkylated aromatic and any combination thereof.

31. The lubricating oil of claim 24 wherein the first base stock has a viscosity greater than 300 cSt, Kv100°C.

32. The lubricating oil of claim 24 further comprising at a third and fourth base stock, the third base stock comprising a PAO having a viscosity of at least 6 cSt and less than 100 cSt, Kv100°C, the fourth base stock comprising an alkylated aromatic base stock.

33. The lubricating oil of claim 24 wherein the second base stock has a viscosity greater than 1.5 and less than 6 cSt, Kv100°C11.

34. The lubricating oil of claim 24 wherein the viscosity difference between the first base stock and the second base stock is greater than 96.

CLAIMS

1. A lubricating oil, comprising

a) at least two base stocks;

b) a metallocene catalyzed PAO first base stock comprising at least 5 percent and no more than 90 percent of the lubricating oil having a viscosity greater than 40 cSt, Kv100°C and the first base stock having a molecular weight distribution (MWD) as a function of viscosity less than algorithm

MWD = 0.41667 + 0.725 * log (Kv at 100°C in cSt);

c) a second base stock comprising at least 10 percent and no more than 90 percent of the lubricating oil with a viscosity less than 10 cSt, $Kv100°C_2$

wherein the metallocene catalyzed PAO first base stock is made from an alpha-olefin selected from the group consisting of a single alpha-olefin of C3 to C30 and at least two alpha-olefins of C3 to C30 with the proviso that the metallocene catalyzed PAO first base stock does not include an ethylene monomer.

2. The lubricating oil of claim 1 wherein the viscosity difference between the first and the second base stocks is greater than 30 cSt, Kv100°C .

3. The lubricating oil of claim 1 wherein the second base stock is chosen from the group consisting of GTL lubricants, wax derived lubricants, Poly-Alpha-Olefin (PAO), Brightstocks, Brightstocks with PIB, Group I base stocks, group II base stocks, group III base stocks, and any combination thereof.

4. The lubricating oil of claim 1 further comprising at least one additive, the additive chosen from the group consisting of antiwear, antioxidant, defoamant,

demulsifier, detergent, dispersant, metal passivator, friction reducer, rust inhibitor, and any combination thereof.

5. The lubricating oil of claim 1 further comprising a third base stock.

6. The lubricating oil of claim 6, wherein the third base stock is chosen from a group consisting of a PAO with a viscosity of at least 6 cSt, Kv100°C and no more than 100 cSt, Kv100°C, ester base stock, alkylated aromatic and any combination thereof.

7. The lubricating oil of claim 6 wherein the first base stock has a viscosity greater than 300 cSt, Kv100°C.

8. The lubricating oil of claim 1 further comprising at a third and fourth base stock, the third base stock comprising a PAO having a viscosity of at least 6 cSt and less than 100 cSt, Kv100°C, the fourth base stock comprising an alkylated aromatic base stock.

9. The lubricating oil of claim 1 wherein the second base stock has a viscosity greater than 1.5 and less than 6 cSt, Kv100°C

10. The lubricating oil of claim 1 wherein the viscosity difference between the first base stock and the second base stock is greater than 96 cSt, Kv100°C.

11. A lubricating oil, comprising

a) at least two base stocks;

b) a first base stock comprising a metallocene catalyzed PAO with a viscosity greater than 40 cSt, Kv100°C, the first base stock has a molecular weight distribution greater than or equal to:

MWD = 0.66017 + 0.44922 * log (Kv at 100°C in cSt);

c) a second base stock comprising a oil with a viscosity less than 10 cSt, Kv100°C,

wherein the metallocene catalyzed PAO first base stock is made from an alpha-olefin selected from the group consisting of a single alpha-olefin of C3 to C30 and at least two alpha-olefins of C3 to C30 with the proviso that the metallocene catalyzed PAO first base stock does not include an ethylene monomer.

12. The lubricating oil of claim 13 wherein the first base stock is greater than 300 cSt, Kv100°C.

13. The lubricating oil of claim 13 wherein the second base stock has a viscosity greater than 1.5 cSt, Kv100°C.

14. The lubricating oil of claim 13 further comprising an alkylated aromatic and an additive package.

15. The lubricating oil of claim 13 wherein the second base stock is chosen from the group consisting of GTL lubricants, wax derived lubricants, Poly Alpha Olefin, Brightstocks, Brightstocks with PIB, Group I base stocks, group II base stocks, group III base stocks, and any combination thereof.

16. The lubricating oil of claim 13 further comprising an additive, the additive chosen from the group consisting of antiwear, antioxidant, defoamant,

demulsifier, detergent, dispersant, metal passivator, friction reducer, rust inhibitor, and any combination thereof.

17. The lubricating oil of claim 13 further comprising at least one additive chosen to obtain favorable lubricant properties from the group consisting of micropitting, air release, pour point, low temperature viscosity, pour point, shear stability, lower oil operating temperature, energy efficiency and any combination thereof.

18. The lubricating oil of claim 13 wherein the viscosity difference between the first base stock and the second base stock is greater than 30 cSt, Kv100°C.

19. The lubricating oil of claim 13 wherein the viscosity difference between the first base stock and the second base stock is greater than 96 cSt, Kv100°C.

20. A method of blending a lubricating oil, comprising,

a) obtaining a metallocene catalyzed PAO first synthetic base stock lubricant the first base stock having a viscosity greater than 40 cSt, Kv100°C and the first bases stock having a molecular weight distribution (MWD) as a function of viscosity less than algorithm

MWD = 0.41667 + 0.725 * log (Kv at 100°C in cSt);

b) obtaining a second synthetic base stock lubricant, the second base stock lubricant has a viscosity less than 10 cSt, Kv100°C;

c) mixing the first and second base stock lubricant to produce the lubricating oil,

wherein the metallocene catalyzed PAO first synthetic base stock is made from an alpha-olefin selected from the group consisting of a single alpha-olefin of C3 to C30 and at least two alpha-olefins of C3 to C30 with the proviso that the metallocene catalyzed PAO first synthetic base stock does not include an ethylene monomer.

21. The method of claim 24 wherein the viscosity difference between the first and the second base stocks is greater than 30 cSt, Kv100°C.

22. The method of claim 24 wherein the second base stock is chosen from the group consisting of GTL lubricants, wax derived lubricants, Poly Alpha Olefin, Brightstocks, Brightstocks with PIB, group I base stocks, group II base stocks, group III base stocks, and any combination thereof.

23. The method of claim 24 further comprising at least one additive, the additive chosen from the group consisting of antiwear, antioxidant, defoamant, demulsifier, detergent, dispersant, metal passivator, friction reducer, rust inhibitor, and any combination thereof.

24. The method of claim 24 further comprising a third base stock.

25. The method of claim 29, wherein the third base stock is chosen from a group consisting of a PAO with a viscosity of at least 6 cSt, Kv100°C and no more than 100 cSt, Kv100°C, ester base stock, alkylated aromatic and any combination thereof.

26. The method of claim 24 wherein the first base stock has a viscosity greater than 300 cSt, Kv100°C.

27. The method of claim 24 further comprising at a third and fourth base stock, the third base stock comprising a PAO having a viscosity of at least 6 cSt and less than 100 cSt, Kv100°C, the fourth base stock comprising an alkylated aromatic base stock.

28. The method of claim 24 wherein the second base stock has a viscosity greater than 1.5 and less than 6 cSt, Kv100°C11.

29. The method of claim 24 wherein the viscosity difference between the first base stock and the second base stock is greater than 96.

30. The lubricating oil of claim 1 wherein the lubricating oil has an ASTM D 3427 air release time to 0.2% air at 75°C of less than 20 minutes.

31. The lubricating oil of claim 1 wherein the lubricating oil has a shear stability loss of less than 10 percent.

32. The lubricating oil of claim 1 wherein the lubricating oil has essentially no VI improvers.

33. The lubricating oil of claim 13 wherein the lubricating oil has an ASTM D 3427 air release time to 0.2% air at 75°C of less than 20 minutes, the lubricating oil has essentially no VI improvers and no transition and alkali metals.

34. The lubricating oil of claim 1 wherein the first bases stock molecular weight distribution (MWD) as a function of viscosity is less than the algorithm

MWD = 0.41667 + 0.725 * log (Kv at 100°C in cSt);

and greater than the algorithm

MWD = 0.8 + 0.3 * log (Kv at 100°C in cSt).

35. The lubricating oil of claim 1 wherein the first bases stock molecular weight distribution (MWD) as a function of viscosity is greater than the algorithm

MWD = 0.8 + 0.3 * log (Kv at 100°C in cSt).