WHAT IS CLAIMED IS:

1. An additive composition comprising:

a long chain primary amine;

a tertiary cycloalkylamine; and

an amino acid;

wherein the additive composition is boron-free and free of a secondary amine.

2. The additive composition of Claim 1, wherein the long chain primary amine is a C_8-C_{24} primary amine.

3. The additive composition of Claim 1, wherein the tertiary cycloalkylamine; is an ethoxylated tertiary cycloalkylamine selected from the group comprising di(ethanol)cyclopentylamine, di(ethanol)cyclohexylamine, di(ethanol)cycloheptylamine, dicyclopentyl(ethanol)amine, and/or dicyclohexyl(ethanol)amine.

4. The additive composition of Claim 1, wherein the amino acid is of the formula $NH_2CHR^2CO_2H$, wherein R^2 is H or alkyl.

5. The additive composition of Claim 4, wherein R^2 is H or a C_1-C_4 alkyl.

6. The additive composition of Claim 1, wherein the amino acid is alanine, arginine, asparagine, aspartic acid, cysteine, glutamine, glutamic acid, glycine, histidine, isoleucine, leucine, lysine, methionine, phenyalanine, proline, serine, threonine, tryptophan, tyrosine, or valine.

7. The additive composition of Claim 1, wherein the amino acid is glycine, lysine, or aspartic acid.

8. A processing fluid comprising:

a petroleum-based or non-petroleum-based oil;

water;

a long chain primary amine;

a tertiary cycloalkylamine; and

an amino acid;

wherein the processing fluid is boron-free and free of a secondary amine.

9. The processing fluid of Claim 8, wherein the long chain primary amine is a C_8-C_{24} primary amine.

10. The processing fluid of Claim 8, wherein the long chain primary amine comprises octylamine, nonylamine, decylamine, undecylamine, dodecylamine, tridecylamine, tetradecylamine, pentadecylamine, hexadecylamine, heptadecylamine, or octadecylamine.

11. The processing fluid of Claim 8, wherein the tertiary cycloalkylamine is an ethoxylated tertiary cycloalkylamine selected from di(ethanol)cyclopentylamine, di(ethanol)cyclohexylamine, di(ethanol)cycloheptylamine, dicyclopentyl(ethanol)amine, or dicyclohexyl(ethanol)amine.

12. The processing fluid of Claim 8, wherein the amino acid is of the formula $NH_2CHR^2CO_2H$, wherein R^2 is H, alkyl, or aryl.

13. The processing fluid of Claim 12, wherein R^2 is H, a C_1-C_4 alkyl, or a C_6-C_{12} alkyl.

14. The processing fluid of Claim 8, wherein the amino acid is alanine, arginine, asparagine, aspartic acid, cysteine, glutamine, glutamic acid, glycine, histidine, isoleucine, leucine, lysine, methionine, phenyalanine, proline, serine, threonine, tryptophan, tyrosine, or valine.

15. The processing fluid of Claim 8, wherein the amino acid is glycine, lysine, or aspartic acid.

16. The processing fluid of Claim 8 further comprising an alkanolamine.

17. The processing fluid of Claim 16, wherein the alkanolamine comprises methanolamine, ethanolamine, propanolamine, trimethanolamine, triethanolamine, tripropanolamine, methyldimethanolamine, ethyldimethanolamine, propyldimethanolamine, cyclohexyldimethanolamine, methyldiethanolamine, ethyldiethanolamine, or propyldiethanolamine.

18. The processing fluid of Claim 8 further comprising a polymerized fatty acid.

19. The processing fluid of Claim 18, wherein the polymerized fatty acid is a polymerized ricinoleic acid derived from castor oil, or a polymerized fatty acid derived from soy bean oil, or a linseed oil.

20. The processing fluid of Claim 8 comprising the petroleum-based oil.

21. The processing fluid of Claim 20, wherein the petroleum-based oil is a refined naphthenic oil or paraffinic oil.

22. The processing fluid of Claim 8 comprising the non-petroleum-based oil.

23. The processing fluid of Claim 22, wherein the non-petroleum-based oil is a vegetable oil, a synthetic ester, a poly alpha olefin, a polyalkylene glycol, or a fatty oil.

24. The processing fluid of Claim 8 further comprising a phosphate ester and/or an ethoxylated fatty amine.

25. The processing fluid of Claim 24 comprising the phosphate ester which is of formula: $[R^4(CH_2CH_2O)_n]_aP(O)[OX]_b$, wherein R^4 is C_6-C_{30} alkyl, phenyl, (C_1-C_{10} alkyl)phenyl, or (C_1-C_{10} dialkyl)phenyl; X is H, ammonium, tetraalkylammonium, amine, or a metal selected from the group consisting of Li, Na, K, Rb, Cu, Ag, Au, Be, Mg, Ca, Sr, Ba, Zn, Cd, and Hg; n is from 0 to 50; a is 1, 2, or 3; and b is 0, 1, or 2, with the proviso that the sum of a and b is 3.

26. The processing fluid of Claim 25, wherein the phosphate ester is a polyethylene glycol monooleyl ether phosphate, polyethylene glycol mono C_{12}-C_{15} alcohol ether phosphate, or polyethylene glycol mono C_{10}-C_{14} alcohol ether phosphate.

27. The processing fluid of Claim 26 comprising the ethoxylated fatty amine, wherein the ethoxylated fatty amine is the reaction product of ethylene oxide and a fatty amine, the ethoxylated fatty amine having the formula $R^3N[(CH_2CH_2O)_mH][(CH_2CH_2O)_nH]$, wherein R^3 is cocoalkyl, tallow, or stearyl, oleyl, m is from 2 to 20, inclusive, and n is from 2 to 20, inclusive.

28. The processing fluid of Claim 27, wherein the ethoxylated fatty amine is a polyoxyethylene cocoamine, bis-(2-hydroxyethyl) isotridecyloxypropylamine or N-tallow-poly(3) oxyethylene-1,3-diaminopropane.

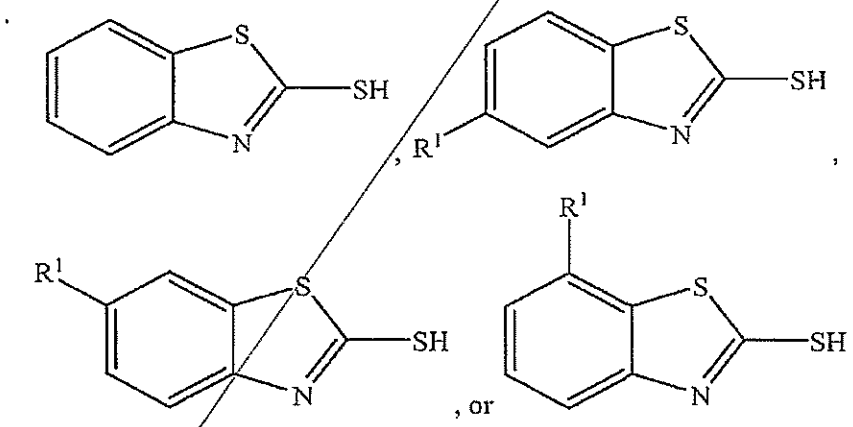
29. The processing fluid of Claim 8, wherein the water is present from about 1 wt% to about 50 wt%.

30. The processing fluid of Claim 8 further comprising a hydrocarbyl succinimide.

31. The processing fluid of Claim 30, wherein the hydrocarbyl succinimide comprises the reaction product of polyisobutylene of molecular weight from about 500 to about 3000 Daltons and maleic anhydride.

32. The processing fluid of Claim 8 further comprising a sulfur-containing compound.

33. The processing fluid of Claim 32, wherein the sulfur-containing compound is elemental sulfur, a sulfurized mineral oil, or a compound of formula:



wherein: R^1 is H, SO_4, NH_2, CH_3, COOH, OCH_3, or OCH_2CH_3.

34. The processing fluid of Claim 8 comprising a sulfur-containing compound and a phosphate ester, wherein the weight ratio of the phosphate ester to the sulfur in the sulfur-containing compound is from about 25:1 to about 1:1.

35. The processing fluid of Claim 8 further comprising an aliphatic carboxylic acid or an aliphatic dicarboxylic acid.

36. The processing fluid of Claim 35, wherein the aliphatic mono- or di-carboxylic acid is C_7-C_{25} mono- or di-carboxylic acid.

37. The processing fluid of Claim 35, wherein the aliphatic mono- or di-carboxylic acid is hexanoic, heptanoic, octanoic, caprylic, isoannoic, neodecanoic, azeleic, decanoic, undecanoic, sebacic, nonanonic, dodecanoic, tetradecanoic, hexadecanoic, octadecanoic, eicosanoic, docosanic, dodecenoic acid, tetradecenoic acid, hexadecenoic, octadecenoic, eicosacnoic, docosenoic, octadecatrienoic, octanedioic, nonanedioic, ricinoleic, decanedioic, undecanedioic, dodecanedioic, tridecanedioic, tetradecanedioic, pentadecanedioic, hexadecanedioic, heptadecanedioic, octadecanedioic, nonadecanedioic, eicosanedioic, docosanedioic, behenic, abietic, or erucic acid.

38. The processing fluid of Claim 8 further comprising an additive comprising a defoaming agent, a corrosion inhibitor, or an olfactory agent.

39. The processing fluid of Claim 8 having a pH of at least 9.

40. The processing fluid of Claim 8 having a pH from 9 to 12.

Claims

1. An additive composition comprising:

   a long chain primary amine;

   a tertiary cycloalkylamine; and

   an amino acid;

   wherein the additive composition is boron-free and free of a secondary amine.

2. The additive composition of Claim 1, wherein the long chain primary amine is a C_8-C_{24} primary amine.

3. The additive composition of Claim 1, wherein the tertiary cycloalkylamine; is an ethoxylated tertiary cycloalkylamine selected from the group comprising di(ethanol)cyclopentylamine, di(ethanol)cyclohexylamine, di(ethanol)cycloheptylamine, dicyclopentyl(ethanol)amine, and/or dicyclohexyl(ethanol)amine.

4. The additive composition of Claim 1, wherein the amino acid is of the formula $NH_2CHR^2CO_2H$, wherein R^2 is H or alkyl.

5. The additive composition of Claim 1, wherein the amino acid is alanine, arginine, asparagine, aspartic acid, cysteine, glutamine, glutamic acid, glycine, histidine, isoleucine, leucine, lysine, methionine, phenyalanine, serine, threonine, tryptophan, tyrosine, or valine.

6. A processing fluid comprising:

   a petroleum-based or non-petroleum-based oil;

   water;

   a long chain primary amine;

   a tertiary cycloalkylamine; and

   an amino acid;

   wherein the processing fluid is boron-free and free of a secondary amine.

7. The processing fluid of Claim 6, wherein the long chain primary amine is a C_8-C_{24} primary amine.

8. The processing fluid of Claim 6, wherein the long chain primary amine comprises octylamine, nonylamine, decylamine, undecylamine, dodecylamine, tridecylamine, tetradecylamine, pentadecylamine, hexadecylamine, heptadecylamine, or octadecylamine.

9. The processing fluid of Claim 6, wherein the tertiary cycloalkylamine is an ethoxylated tertiary cycloalkylamine selected from di(ethanol)cyclopentylamine, di(ethanol)cyclohexylamine, di(ethanol)cycloheptylamine, dicyclopentyl(ethanol)amine, or dicyclohexyl(ethanol)amine.

10. The processing fluid of Claim 6, wherein the amino acid is of the formula $NH_2CHR^2CO_2H$, wherein R^2 is H, alkyl, or aryl.

11. The processing fluid of Claim 6, wherein the amino acid is alanine, arginine, asparagine, aspartic acid, cysteine, glutamine, glutamic acid, glycine, histidine, isoleucine, leucine, lysine, methionine, phenyalanine, serine, threonine, tryptophan, tyrosine, or valine.

12. The processing fluid of Claim 6, further comprising an alkanolamine comprising methanolamine, ethanolamine, propanolamine, trimethanolamine, triethanolamine, tripropanolamine, methyldimethanolamine, ethyldimethanolamine, propyldimethanolamine, cyclohexyldimethanolamine, methyldiethanolamine, ethyldiethanolamine, or propyldiethanolamine.

13. The processing fluid of Claim 6 further comprising a polymerized fatty acid which is a polymerized ricinoleic acid derived from castor oil, or a polymerized fatty acid derived from soy bean oil, or a linseed oil.

14. The processing fluid of Claim 6 comprising the petroleum-based oil.

15. The processing fluid of Claim 6 comprising the non-petroleum-based oil.

16. The processing fluid of Claim 6 further comprising a phosphate ester and/or an ethoxylated fatty amine.

17. The processing fluid of Claim 6, wherein the water is present from about 1 wt% to about 50 wt%.

18. The processing fluid of Claim 6 further comprising a hydrocarbyl succinimide.

19. The processing fluid of Claim 6 further comprising a sulfur-containing compound.

20. The processing fluid of Claim 6 comprising a sulfur-containing compound and a phosphate ester, wherein the weight ratio of the phosphate ester to the sulfur in the sulfur-containing compound is from about 25:1 to about 1:1.

21. The processing fluid of Claim 6 further comprising an aliphatic carboxylic acid or an aliphatic dicarboxylic acid.

22. The processing fluid of Claim 6 further comprising an additive comprising a defoaming agent, a corrosion inhibitor, or an olfactory agent.

23. The processing fluid of Claim 6 having a pH of at least 9.