CLAIMS

What is claimed is:

1. A process for preparing a highly overbased magnesium alkyltoluene sulfonate comprising:

(a) reacting at least one oil soluble alkyltoluene sulfonic acid and at least one source of magnesium, in the presence of a mixture comprising:

(i) at least one hydrocarbon solvent; and

(ii) at least one low molecular weight alcohol;

(b) contacting the reaction product of (a) with at least one promoter and water;

(c) contacting the product of (b) with an overbasing acid; and

(d) heating the reaction product of (c) to a temperature greater than the distillation temperature of the hydrocarbon solvent, the low molecular weight alcohol, and the water to distill the hydrocarbon solvent, the low molecular weight alcohol, and the water, and

wherein the overbased magnesium alkyltoluene sulfonate has a Total Base Number of at least 300 mg KOH/g.

~~2. The process according to claim 1, wherein the overbased magnesium alkyltoluene sulfonate has a Total Base Number of at least about 300 mg KOH/g.~~

32. The process according to claim ~~2~~1, wherein the overbased magnesium alkyltoluene sulfonate has a Total Base Number of at least ~~about~~ 350 mg KOH/g.

43. The process according to claim 1, wherein the oil soluble alkyltoluene sulfonic acid is a linear alkyltoluene sulfonic acid.

54. The process according to claim 43, wherein the linear alkyl group of the linear alkyltoluene sulfonic acid comprises at least 16 carbon atoms.

65. The process according to claim 54, wherein the linear alkyl group of the linear alkyltoluene sulfonic acid comprises ~~about~~ 18 to ~~about~~ 28 carbon atoms.

76. The process according to claim 65, wherein the linear alkyl group of the linear alkyltoluene sulfonic acid comprises ~~about~~ 20 to ~~about~~ 24 carbon atoms.

~~8~~7. The process according to claim 1, wherein the oil soluble alkyltoluene sulfonic acid is a branched alkyltoluene sulfonic acid.

~~9~~8. The process according to claim ~~8~~7, wherein the branched alkyl group of the branched alkyltoluene sulfonic acid is derived from the isomerization of normal alpha olefin having at least 16 carbon atoms.

~~10~~9. The process according to claim ~~9~~8, wherein the branched alkyl group of the branched alkyltoluene sulfonic acid is derived from the isomerization of normal alpha olefin having from ~~about~~ 18 to ~~about~~ 28 carbon atoms.

~~11~~10. The process according to claim ~~10~~9, wherein the branched alkyl group of the branched alkyltoluene sulfonic acid is derived from the isomerization of normal alpha olefin having from ~~about~~ 20 to ~~about~~ 24 carbon atoms.

~~12~~11. The process according to claim 1, wherein the source of magnesium is magnesium oxide.

~~13~~12. The process according to claim 1, wherein the hydrocarbon solvent is xylene.

~~14~~13. The process according to claim 1, wherein the process wherein the low molecular weight alcohol is a monohydric alcohol.

~~15~~14. The process according to claim ~~14~~13, wherein the low molecular weight monohydric alcohol is methanol.

~~16~~15. The process according to claim 1, wherein the promoter is selected from the group consisting of acetic acid, stearic acid, dodecyl succinic anhydride, polyisobutenyl succinic anhydride and mixtures thereof.

~~17~~16. The process according to claim 1, wherein the overbasing acid is carbon dioxide.

~~18~~17. A highly overbased magnesium alkyltoluene sulfonate prepared by the process of claim 1.

~~19~~18. A lubricating oil composition comprising a major amount of an oil of lubricating viscosity and a minor amount of the highly overbased magnesium alkyltoluene sulfonate prepared by the process of claim 1.

~~20~~19. A lubricating oil additive concentrate comprising from ~~about~~ 90 wt. % to ~~about~~ 10 wt. % of an organic liquid diluent and from ~~about~~ 10 wt. % to ~~about~~ 90 wt. % of the highly overbased magnesium alkyltoluene sulfonate prepared by the process of claim 1.