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## (54) Title: FUNCTIONAL FLUIDS FOR INTERNAL COMBUSTION ENGINES



(57) Abstract: The present invention provides a functional fluid suitable for use in an internal combustion engine, comprising: (a) a major amount of a base fluid; (b) a minor amount of a polysubstituted alkanol amine derivative reaction product obtainable by reacting: (i) a carboxylate compound of formula (I)  $R^1COOR^2$  in which:  $R^1$  is an aliphatic  $C_{1-30}$ -hydrocarbon radical; and  $R^2$  is hydrogen or alkyl, mono- or polyhydroxyalkyl, or ammonium; with (ii) an alkanol amine of the formula (II)  $NHR^3R^4$ , wherein  $R^3$  and  $R^4$  are independently selected from hydrogen atoms and linear or branched-chain hydrocarbon groups, the carbon chain of which is optionally interrupted by one or more -NH- groups and which optionally has at least one hydroxyl group attached to a carbon atom of the hydrocarbon group, with the proviso that  $R^3$  and  $R^4$  are not both

hydrogen atoms and that at least one of said residues  $R^3$  and  $R^4$  carries at least one hydroxyl group; in a molar ratio of the -COO- groups of the carboxylate compound of formula (I) to the molar sum of OH and NH groups of the alkanol amine of formula (II) in a range and under reaction conditions supporting the formation of a reaction product comprising polysubstituted alkanol amine derivatives; and (c) a minor amount of a detergent additive.

  
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