

## Title (en)

Fuel additive compositions containing mannich condensation products and hydrocarbyl-substituted polyoxyalkylene amines

## Title (de)

Mannichkondensationsprodukte und Amine mit hydrocarbylsubstituiertem Polyoxyalkylen enthaltende Brennstoffzusatzzusammenstzungen

## Title (fr)

Compositions additives pour combustible contenant des produits de condensation mannich et des amines à polyoxyalkylényle substitué par un hydrocarbyle

## Publication

**EP 1132455 A1 20010912 (EN)**

## Application

**EP 01301299 A 20010213**

## Priority

US 51628900 A 20000301

## Abstract (en)

A novel fuel additive composition comprising: (a) a Mannich condensation product of (1) a high molecular weight alkyl-substituted hydroxyaromatic compound wherein the alkyl group has a number average molecular weight of from about 300 to about 5,000 (2) an amine which contains an amino group having at least one active hydrogen atom, and (3) an aldehyde, wherein the respective molar ratio of reactants (1), (2) and (3) is 1:0.1-10:0.1-10; and (b) a hydrocarbyl-substituted polyoxyalkylene amine having the formula: <CHEM> or a fuel-soluble salt thereof; wherein R is a hydrocarbyl group having from about 1 to about 30 carbon atoms; one of R1 and R2 is methyl or ethyl and the other is hydrogen, and each R1 and R2 is independently selected in each -O-CHR1-CHR2- unit; A is amino, N-alkyl amino having about 1 to about 20 carbon atoms in the alkyl group, N,N-dialkyl amino having about 1 to about 20 carbon atoms in each alkyl group, or a polyamine moiety having about 2 to about 12 amine nitrogen atoms and about 2 to about 40 carbon atoms; and x is an integer from about 5 to about 100; and wherein the weight ratio of polyoxyalkylene amine to Mannich condensation product is from about 0.5:1 to about 12:1. The fuel additive composition of the present invention is useful for the prevention and control of engine oil screen plugging.

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