

COPOLYMER DISPERSANTS VIA VINYL TERMINATED PROPENE POLYMERS

ABSTRACT

A novel copolymer of an unsaturated acidic reactant and an atactic vinyl terminated propene polymer (VTPP) and its use in preparation of fuel and lubricant additives is taught. The VTPP has a major amount of polymer chains containing terminal vinyl unsaturation, a number average molecular weight of at least 500, and comprises at least 70 weight per cent propene and 0 to 30 weight per cent of at least one olefin selected from the group consisting of C_2 and C_4 to C_{10} olefins. The unsaturated acidic reactant comprises at least one unsaturated C_4 to C_{10} carboxylic or dicarboxylic acid or anhydride. An oil soluble dispersant additive of the invention useful in oleaginous compositions is prepared by contacting the atactic VTPP copolymer with at least one nucleophilic reagent selected from the group consisting of amines, alcohols, metal reactants and mixtures thereof under conditions effective to form adducts of the nucleophilic reagent with the copolymer. The novel dispersants made from the copolymers and terpolymers of the invention can be polymeric succinic ester-amide dispersants, polymeric succinimide dispersants, polymeric succinic amide-triazole dispersants, or polymeric succinic triazole dispersants. Fuel and lubricant compositions containing such additives are a part of the invention.

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