

ABSTRACT

A diesel fuel additive composition, a fuel containing the fuel additive, a method for improving diesel engine performance using the additive and a method for making the additive for diesel engines having a high pressure fuel injection system. The fuel additive has a number average molecular weight (M_n) of from about 500 to about 10,000 and is selected from a hydrocarbyl-substituted succinic acid or anhydride or derivative thereof and a hydrocarbyl-substituted Mannich base. The additive has a molecular weight distribution such that less than about 25 wt.% of the additive has a molecular weight of 400 or less as measured by gel permeation chromatography (GPC) based on a polystyrene calibration curve.