

ALKYLAROMATIC LUBRICANT FLUIDS

Abstract

Provided are alkylaromatic compositions and processes for producing them. The alkylaromatic compositions include an aromatic moiety other than unsubstituted naphthalene; and an alkyl moiety having a carbon atom number in the range between 12 to 40, wherein said alkyl moiety is attached to said aromatic moiety such that at least 25 mol% of the benzylic carbons are quaternary. The process for producing the alkylaromatic compositions include contacting at least one an aromatic compound and a mono-olefin having a carbon atom number in the range between 12 to 40 in the presence of an acidic alkylation catalyst under alkylation conditions, wherein at least 50 mol% of the mono-olefin structure comprises a vinylidenyl structure, and thereby producing said alkylaromatic compound having at least 25 mol% of benzylic carbons that are quaternary. The alkylaromatic compositions disclosed herein are liquids that have improved thermo- and oxidative stability and pour point.