BASE OIL COMPOSITION COMPRISING OLIGOMERIZED OLEFINS

This application is related to co-filed patent applications titled "Oligomerization of Propylene to Produce Base Oil Products Using Ionic Liquids-Based Catalysis" and "Tuning an Oligomerizing Step to Produce a Base Oil with Selected Properties"; herein incorporated in their entireties.

FIELD OF THE INVENTION

This invention is directed to compositions of base oils having viscosity indexes from 25 to 90.

SUMMARY OF THE ~~INVENTION~~DISCLOSURE

We provide a base oil, comprising one or more oligomerized olefins, wherein the base oil has:

a. a kinematic viscosity at 100°C greater than 2.9 mm2/s;
b. a viscosity index from 25 to 90; and
c. a cloud point less than -55°C.

We provide a base oil made by oligomerizing propylene in an ionic liquid catalyst, where the base oil has a viscosity index from 25 to 90 and the base oil is colorless.

We also provide a base oil made by oligomerizing an olefin feed comprising propylene in an acidic alkyl-pyridinium chloroaluminate ionic liquid, wherein the base oil has a viscosity index at 100°C greater than 2.9 mm^2/s, a viscosity index from 25 to 90, and a cloud point less than -55°C.

In a first aspect, there is provided a base oil, comprising one or more oligomerized olefins, wherein the base oil has:

a. a kinematic viscosity at 100° C. of 13 mm^2/s or greater;

b. a viscosity index from 25 to 90; and

c. a cloud point less than −55° C.

In a second aspect, there is provided a base oil made by oligomerizing propylene in an ionic liquid catalyst, wherein the base oil has a kinematic viscosity at 100° C. of 13 mm^2/s or greater, a viscosity index from 25 to 90, and the base oil is colorless.

In a third aspect, there is provided a base oil made by oligomerizing an olefin feed comprising propylene in an acidic alkyl-pyridinium chloroaluminate ionic liquid, wherein the base oil has a kinematic viscosity at 100° C. of 13 mm^2/s or greater, a viscosity index from 25 to 90, and a cloud point less than −55° C.

DETAILED DESCRIPTION OF THE INVENTION

In the present application the term base oil is used to mean a lubricant component that can be used to produce a finished lubricant.