CLAIMS

1. A lubricating oil composition comprising:

a lubricating base oil comprising a first lubricating base oil component having a urea adduct value of not greater than 4 % by mass, a kinematic viscosity at 40°C of 14-25 mm^2/s and a viscosity index of 120 or higher, and a second lubricating base oil component having a kinematic viscosity at 40°C of less than 14 mm^2/s, wherein the content of the first lubricating base oil component is 10-99 % by mass and the content of the second lubricating base oil component is 1-50 % by mass, based on the total amount of the lubricating base oil; and

a viscosity index improver,

the lubricating oil composition having a kinematic viscosity at 100°C of 4-12 mm^2/s and a viscosity index of 200-350.

2. The lubricating oil composition according to claim 1, wherein, as the distillation properties of the lubricating base oil, an initial boiling point is not higher than 370°C, a 90% distillation temperature is 430°C or higher, and a difference between the 90% distillation temperature and a 10% distillation temperature is at least 50°C.

3. The lubricating oil composition according to claim 1 or 2, wherein the viscosity index improver is a poly(meth)acrylate-based viscosity index improver.

4. The lubricating oil composition according to claim 3, wherein the PSSI of the poly(meth)acrylate-based viscosity index improver is not greater than 40, and the ratio of the weight-average molecular weight and the PSSI of the poly(meth)acrylate-based viscosity index

improver is at least 1×10^4.

5. The lubricating oil composition according to any one of claims 1 to 4, wherein a ratio of a HTHS viscosity at 100°C with respect to a HTHS viscosity at 150°C satisfies the condition represented by the following inequality (A):

HTHS (100°C)/HTHS (150°C) $\leq$2.04 (A)

, wherein HTHS (100°C) represents the HTHS viscosity at 100°C and HTHS (150°C) represents the HTHS viscosity at 150°C.

6. The method for producing a lubricating oil composition comprising: blending a first lubricating base oil component having a urea adduct value of not greater than 4 % by mass, a kinematic viscosity at 40°C of 14-25 mm^2/s and a viscosity index of 120 or higher, a second lubricating base oil component having a kinematic viscosity at 40°C of less than 14 mm^2/s, and a viscosity index improver, to obtain a lubricating base oil wherein the content of the first lubricating base oil component is 10-99 % by mass and the content of the second lubricating base oil component is 1-50 % by mass, based on the total amount of the lubricating base oil; and

adding a viscosity index improver to the lubricating base oil, to obtain a lubricating oil composition having a kinematic viscosity at 100°C of 4-12 mm^2/s and a viscosity index of 200-350.

7. The lubricating oil composition for an internal combustion engine comprising:

a lubricating base oil, having a viscosity index of 100 or higher, an initial boiling point of not higher than 400°C, a 90% distillation temperature of 470°C or higher and a difference between the 90%

distillation temperature and the 10% distillation temperature of at least a 70°C,

an ashless antioxidant containing no sulfur as a constituent element; and

at least one selected from among ashless antioxidants containing sulfur as a constituent element and organic molybdenum compounds,

wherein the lubricating base oil comprises a first lubricating base oil component having a urea adduct value of not greater than 4 % by mass, a viscosity index of 100 or higher and a kinematic viscosity at 100°C of at least 3.5 mm^2/s and less than 4.5 mm^2/s, and a second lubricating base oil component having a urea adduct value of not greater than 4 % by mass, a viscosity index of 120 or higher and a kinematic viscosity at 100°C of 4.5-20 mm^2/s.

8. The lubricating oil composition for an internal combustion engine according to claim 7, wherein

the first lubricating base oil component is a lubricating base oil component obtained by a step of hydrocracking/hydroisomerization of a feed stock oil containing normal paraffins so as to obtain a treated product having a urea adduct value of not greater than 4 % by mass, a viscosity index of 100 or higher and a kinematic viscosity at 100°C of at least 3.5 mm^2/s and less than 4.5 mm^2/s, and

the second lubricating base oil component is a lubricating base oil component obtained by a step of hydrocracking/hydroisomerization of a feed stock oil containing normal paraffins so as to obtain a treated product having a urea adduct value of not greater than 4 % by mass, a

viscosity index of 120 or higher and a kinematic viscosity at 100°C of 4.5-20 mm^2/s.

9. The lubricating oil composition for an internal combustion engine according to claim 8, wherein the feed stock oil contains at least 50 % by mass slack wax obtained by solvent dewaxing of a lubricating base oil.

10. The lubricating oil composition for an internal combustion engine according to any one of claims 7 to 9, wherein the low-temperature viscosity grade is SAE0W or 5W and the high-temperature viscosity grade is SAE30 or greater.

11. The lubricating oil composition for an internal combustion engine according to any one of claims 7 to 10, wherein the CCS viscosity at -35°C is not greater than 6,000 mPa·s.

12. The lubricating oil composition for an internal combustion engine according to any one of claims 7 to 11, wherein the MRV viscosity at -40°C is not greater than 20,000 mPa·s.

13. A method for producing a lubricating oil composition for an internal combustion engine comprising:

blending a first lubricating base oil component having a urea adduct value of not greater than 4 % by mass, a viscosity index of 100 or higher and a kinematic viscosity at 100°C of at least 3.5 mm^2/s and less than 4.5 mm^2/s, and a second lubricating base oil component having a urea adduct value of not greater than 4 % by mass, a viscosity index of 120 or greater and a kinematic viscosity at 100°C of 4.5-20 mm^2/s, to obtain a lubricating base oil having a viscosity index of 100 or higher, an initial boiling point of not higher than 400°C, a

90% distillation temperature of 470°C or higher and a difference between the 90% distillation temperature and a 10% distillation temperature of at least a 70°C, and

adding an ashless antioxidant containing no sulfur as a constituent element, and at least one selected from among ashless antioxidants containing sulfur as a constituent element and organic molybdenum compounds to the lubricating base oil.

14. A lubricating oil composition for an internal combustion engine, comprising:

a lubricating base oil having a urea adduct value of not greater than 4 % by mass and a viscosity index of 100 or higher; and

a poly(meth)acrylate having a weight-average molecular weight of 200,000-400,000.

15. The lubricating oil composition for an internal combustion engine according to claim 14, wherein the lubricating base oil is a lubricating base oil obtained by a step of hydrocracking/hydroisomerization of a feed stock oil containing normal paraffins so as to obtain a treated product having a urea adduct value of not greater than 4 % by mass and a viscosity index of 100 or higher.

16. The lubricating oil composition for an internal combustion engine according to claim 15, wherein the feed stock oil contains at least 50 % by mass slack wax obtained by solvent dewaxing of a lubricating base oil.

CLAIMS

1. A lubricating oil composition comprising:

a lubricating base oil comprising a first lubricating base oil component having a urea adduct value of not greater than 4 % by mass, a kinematic viscosity at 40°C of 14-25 mm^2/s and a viscosity index of 120 or higher, and a second lubricating base oil component having a kinematic viscosity at 40°C of less than 14 mm^2/s, wherein the content of the first lubricating base oil component is 10-99 % by mass and the content of the second lubricating base oil component is 1-50 % by mass, based on the total amount of the lubricating base oil; and

a viscosity index improver,

the lubricating oil composition having a kinematic viscosity at 100°C of 4-12 mm^2/s and a viscosity index of 200-350.

2. The lubricating oil composition according to claim 1, wherein the viscosity index improver is a poly(meth)acrylate-based viscosity index improver.

3. The lubricating oil composition according to claim 3, wherein the PSSI of the poly(meth)acrylate-based viscosity index improver is not greater than 40, and the ratio of the weight-average molecular weight and the PSSI of the poly(meth)acrylate-based viscosity index improver is at least 1×10^4.

4. The lubricating oil composition according to claim 1, wherein a ratio of a HTHS viscosity at 100°C with respect to a HTHS viscosity at 150°C satisfies the condition represented by the following inequality (A):

HTHS (100°C)/HTHS (150°C) $\leq$2.04 (A)

; wherein HTHS (100°C) represents the HTHS viscosity at 100°C and HTHS (150°C) represents the HTHS viscosity at 150°C.

5. The method for producing a lubricating oil composition comprising: blending a first lubricating base oil component having a urea adduct value of not greater than 4 % by mass, a kinematic viscosity at 40°C of 14-25 mm^2/s and a viscosity index of 120 or higher, a second lubricating base oil component having a kinematic viscosity at 40°C of less than 14 mm^2/s, and a viscosity index improver, to obtain a lubricating base oil wherein the content of the first lubricating base oil component is 10-99 % by mass and the content of the second lubricating base oil component is 1-50 % by mass, based on the total amount of the lubricating base oil; and

adding a viscosity index improver to the lubricating base oil, to obtain a lubricating oil composition having a kinematic viscosity at 100°C of 4-12 mm^2/s and a viscosity index of 200-350.

6. The lubricating oil composition for an internal combustion engine comprising:

a lubricating base oil, having a viscosity index of 100 or higher, an initial boiling point of not higher than 400°C, a 90% distillation temperature of 470°C or higher and a difference between the 90% distillation temperature and the 10% distillation temperature of at least a 70°C,

an ashless antioxidant containing no sulfur as a constituent element; and

at least one selected from among ashless antioxidants containing sulfur as a constituent element and organic molybdenum compounds,

wherein the lubricating base oil comprises a first lubricating base oil component having a urea adduct value of not greater than 4 % by mass, a viscosity index of 100 or higher and a kinematic viscosity at 100°C of at least 3.5 mm^2/s and less than 4.5 mm^2/s, and a second lubricating base oil component having a urea adduct value of not greater than 4 % by mass, a viscosity index of 120 or higher and a kinematic viscosity at 100°C of 4.5-20 mm^2/s.

7. The lubricating oil composition for an internal combustion engine according to claim 6, wherein

the first lubricating base oil component is a lubricating base oil component obtained by hydrocracking/hydroisomerization of a feed stock oil containing normal paraffins so as to obtain a treated product having a urea adduct value of not greater than 4 % by mass, a viscosity index of 100 or higher and a kinematic viscosity at 100°C of at least 3.5 mm^2/s and less than 4.5 mm^2/s, and

the second lubricating base oil component is a lubricating base oil component obtained by a step of hydrocracking/hydroisomerization of a feed stock oil containing normal paraffins so as to obtain a treated product having a urea adduct value of not greater than 4 % by mass, a viscosity index of 120 or higher and a kinematic viscosity at 100°C of 4.5-20 mm^2/s.

8. The lubricating oil composition for an internal combustion engine according to claim 6, wherein the low-temperature viscosity grade is SAE0W or 5W and the high-temperature viscosity grade is SAE30 or greater.

9. The lubricating oil composition for an internal combustion engine according to claim 6, wherein the CCS viscosity at -35°C is not greater than 6,000 mPa·s.

10. The lubricating oil composition for an internal combustion engine according to claim 6, wherein the MRV viscosity at -40°C is not greater than 20,000 mPa·s.

11. A method for producing a lubricating oil composition for an internal combustion engine comprising:

blending a first lubricating base oil component having a urea adduct value of not greater than 4 % by mass, a viscosity index of 100 or higher and a kinematic

viscosity at 100°C of at least 3.5 mm^2/s and less than 4.5 mm^2/s, and a second lubricating base oil component having a urea adduct value of not greater than 4 % by mass, a viscosity index of 120 or greater and a kinematic viscosity at 100°C of 4.5-20 mm^2/s, to obtain a lubricating base oil having a viscosity index of 100 or higher, an initial boiling point of not higher than 400°C, a 90% distillation temperature of 470°C or higher and a difference between the 90% distillation temperature and a 10% distillation temperature of at least 70°C, and

adding an ashless antioxidant containing no sulfur as a constituent element, and at least one selected from among ashless antioxidants containing sulfur as a constituent element and organic molybdenum compounds to the lubricating base oil.