CLAIMS

[Claim 1]

A grease composition comprising at least one base oil selected from a mineral oil-based lubricant base oil and a synthetic lubricant base oil, an amide compound which comprises at least one of a monoamide or a bisamide, a solid lubricant which does not contain a heavy metal or sulfur, and a urea-based thickener which comprises at least one of an aliphatic diurea compound, an alicyclic diurea compound, or an aromatic diurea compound, wherein the amide compound is heated and melted at least once together with the base oil.

[Claim 2]

The grease composition according to claim 1, wherein the mineral oil-based lubricant base oil and the synthetic lubricant base oil have a kinematic viscosity of 1 to 1000 mm^2/s at 40^oC, and the synthetic lubricant base oil is α-olefin.

[Claim 3]

The grease composition according to claim 1 or 2, wherein the amide compound represented by any one of following General Formulas (1) to (3)~~includes an alkyl group having 6 to 24 carbon atoms~~.

R^1-CO-NH-R^2 (1)

R^1-CO-NH-A^1-NH-CO-R^2 (2)

R^1-NH-CO-A^1-CO-NH-R^2 (3)

(wherein R^1, R^2 are independently a saturated or unsaturated chain hydrocarbon group having 12 to 20 carbon atoms. A^1 is an aliphatic hydrocarbon group having 1 to 10 carbon atoms, an alicyclic hydrocarbon group, an aromatic hydrocarbon group, or a divalent hydrocarbon group having 1 to 10 carbon atoms formed by combining these

groups.)

[Claim 4]

The grease composition according to any one of claims 1 to 3, wherein the solid lubricant is at least one selected from melamine cyanulate, polytetrafluoroethylene, and boron nitride.

[Claim 5]

The grease composition according to any one of claims 1 to 4, wherein the urea-based thickener is at least one selected from an aliphatic diurea compound~~,~~ and an alicyclic diurea compound~~, and an aromatic diurea compound~~.

[Claim 6]

The grease composition according to any one of claims 1 to 5, the grease composition being used for lubrication of metal-metal sliding parts.

[Claim 7]

A method for producing a grease composition that comprises at least one base oil selected from a mineral oil-based lubricant base oil and a synthetic lubricant base oil, an amide compound which comprises at least one of a monoamide or a bisamide, a solid lubricant which does not contain a heavy metal or sulfur, and a urea-based thickener which comprises at least one of an aliphatic diurea compound, an alicyclic diurea compound, or an aromatic diurea compound, wherein the method comprises adding the amide compound to the base oil, followed by heating to melt the amide compound at least once.