DESCRIPTION

Title of Invention: COMPOSITION CONTAINING FLUORINE OIL

Technical Field

[0001]

The present disclosure relates to a composition containing a fluorine oil.

Background Art

[0002]

Hydrofluoroethers (HFEs) have attracted attention as alternatives to chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) because of their low global warming potential (GWP), low ozone depletion potential (ODP), and low toxicity.

[0003]

PTL 1 discloses a cleaning agent containing an azeotropic mixture-like composition containing 1,1,1,3,3,3-hexafluoroisopropyl methyl ether, which is an HFE, and hexafluoroisopropanol.

[0004]

PTL 2 discloses that an azeotrope-like composition containing 1,1,1,2,3,3-hexafluoro-3-methoxy-propane, which is another HFE, and 1-bromopropane is usable in cleaning processes as a refrigerant.

Citation List

Patent Literature

[0005]

PTL 1: JP2015-143359A

PTL 2: JP2011-506681A

Summary ~~of Invention~~

Technical Problem

[0006]

for use in a coating agent.

Item 5.

A solvent composition or cleaning composition for removing a fluorine oil, the composition comprising 1,1,1,3,3,3-hexafluoroisopropyl methyl ether (HFE-356mmz) and/or 1,1,2,3,3,3-hexafluoropropyl methyl ether (HFE-356mec).

Item 6.

A cleaning method comprising removing a fluorine oil by using a cleaning agent containing 1,1,1,3,3,3-hexafluoroisopropyl methyl ether (HFE-356mmz) and/or 1,1,2,3,3,3-hexafluoropropyl methyl ether (HFE-356mec).

Item 7.

A dissolution method comprising dissolving a fluorine oil by using a solvent containing 1,1,1,3,3,3-hexafluoroisopropyl methyl ether (HFE-356mmz) and/or 1,1,2,3,3,3-hexafluoropropyl methyl ether (HFE-356mec).

Item 8.

A coating method comprising applying the composition of any one of Items 1 to 3.

In one aspect, there is provided a composition comprising (A) 1,1,1,3,3,3-hexafluoroisopropyl methyl ether (HFE-356mmz) and/or 1,1,2,3,3,3-hexafluoropropyl methyl ether (HFE-356mec), and (B) a fluorine oil, wherein the fluorine oil is at least one compound selected from the group consisting of perfluoropolyether compounds, compounds containing a perfluoropolyether group and a functional group, and low-molecular polymers of chlorotrifluoroethylene.

In another aspect, there is provided a solvent composition or cleaning composition for removing a fluorine oil, the composition comprising 1,1,1,3,3,3-hexafluoroisopropyl methyl

ether (HFE-356mmz) and/or 1,1,2,3,3,3-hexafluoropropyl methyl ether (HFE-356mec), wherein the fluorine oil is at least one compound selected from the group consisting of perfluoropolyether compounds, compounds containing a perfluoropolyether group and a functional group, and low-molecular polymers of chlorotrifluoroethylene.

In another aspect, there is provided a cleaning method comprising removing a fluorine oil by using a cleaning agent containing 1,1,1,3,3,3-hexafluoroisopropyl methyl ether (HFE-356mmz) and/or 1,1,2,3,3,3-hexafluoropropyl methyl ether (HFE-356mec), wherein the fluorine oil is at least one compound selected from the group consisting of perfluoropolyether compounds, compounds containing a perfluoropolyether group and a functional group, and low-molecular polymers of chlorotrifluoroethylene.

In another aspect, there is provided a dissolution method comprising dissolving a fluorine oil by using a solvent containing 1,1,1,3,3,3-hexafluoroisopropyl methyl ether (HFE-356mmz) and/or 1,1,2,3,3,3-hexafluoropropyl methyl ether (HFE-356mec), wherein the fluorine oil is at least one compound selected from the group consisting of perfluoropolyether compounds, compounds containing a perfluoropolyether group and a functional group, and low-molecular polymers of chlorotrifluoroethylene.

In another aspect, there is provided a coating method comprising applying the composition as defined herein.

Advantageous Effects of Invention

[0008]

The present disclosure provides a novel composition containing HFE-356mmz and/or HFE-356mec and a fluorine oil. The present disclosure also provides a solvent composition or cleaning composition containing HFE-356mmz and/or HFE-356mec for removing a fluorine oil.

Description of Embodiments

[0009]

The present disclosure includes the following

CLAIMS

[Claim 1]

A composition comprising

(A) 1,1,1,3,3,3-hexafluoroisopropyl methyl ether (HFE-356mmz) and/or 1,1,2,3,3,3-hexafluoropropyl methyl ether (HFE-356mec), and

(B) a fluorine oil,

wherein the fluorine oil is at least one compound selected from the group consisting of perfluoropolyether compounds, compounds containing a perfluoropolyether group and a functional group, and low-molecular polymers of chlorotrifluoroethylene.

~~[Claim 2]~~

~~The composition according to claim 1, wherein the fluorine oil is at least one compound selected from the group consisting of perfluoropolyether compounds, compounds containing a perfluoropolyether group and a functional group, and low-molecular polymers of chlorotrifluoroethylene.~~

[Claim ~~3~~2]

The composition according to claim 1~~ or 2~~, wherein the content of component (A) is 1 mass% or more and 99.99 mass% or less, and the content of component (B) is 0.01 mass% or more and 99 mass% or less, based on the total amount of component (A) and component (B).

[Claim ~~4~~3]

The composition according to ~~any one of~~ claim~~s~~ 1 ~~to 3~~or 2, for use in a coating agent.

[Claim ~~5~~4]

A solvent composition or cleaning composition for removing a fluorine oil, the composition comprising 1,1,1,3,3,3-hexafluoroisopropyl methyl ether (HFE-356mmz) and/or 1,1,2,3,3,3-hexafluoropropyl methyl ether (HFE-356mec),

wherein the fluorine oil is at least one compound selected from the group consisting of perfluoropolyether compounds, compounds containing a perfluoropolyether group and a functional group, and low-molecular polymers of chlorotrifluoroethylene.

[Claim ~~6~~5]

A cleaning method comprising removing a fluorine oil by using a cleaning agent containing 1,1,1,3,3,3-hexafluoroisopropyl methyl ether (HFE-356mmz) and/or 1,1,2,3,3,3-hexafluoropropyl methyl ether (HFE-356mec),

wherein the fluorine oil is at least one compound selected from the group consisting of perfluoropolyether compounds, compounds containing a perfluoropolyether group and a functional group, and low-molecular polymers of chlorotrifluoroethylene.

[Claim ~~7~~6]

A dissolution method comprising dissolving a fluorine oil by using a solvent containing 1,1,1,3,3,3-hexafluoroisopropyl methyl ether (HFE-356mmz) and/or 1,1,2,3,3,3-hexafluoropropyl methyl ether (HFE-356mec),

wherein the fluorine oil is at least one compound selected from the group consisting of perfluoropolyether compounds, compounds containing a perfluoropolyether group and a functional group, and low-molecular polymers of chlorotrifluoroethylene.

[Claim ~~8~~7]

A coating method comprising applying the composition of ~~any one of~~ claim~~s~~ 1 ~~to 3~~or 2.