Related Art Documents

Patent Documents

[0005]

Patent Document 1: JP-A-2009-079117

Patent Document 2: JP-A-2006-193644

Patent Document 3: JP-A-2009-155627

Patent Document 4: JP-A-2000-143904

Patent Document 5: JP-A-2005-146013

Summary ~~of the Invention~~

[0006]

An object of the present embodiments disclosed herein~~invention~~ is to provide a polypropylene-based resin composition which has excellent mechanical properties, suffers only a small amount of flow marks, and has excellent low gloss property and scratch resistance.

[0007]

According to the disclosure~~invention~~, the following polypropylene-based resin composition or the like are provided.

1. In one aspect, there is provided a~~A~~ polypropylene-based resin composition comprising 100 parts by weight of the following component (A), 18 parts by weight or more and 65 parts by weight or less of the following component (B), 6 parts by weight or more and 45 parts by weight or less of the following component (C), 25 parts by weight or more and 60 parts by weight or less of the following component (D), 0.1 part by weight or more and 6.5 parts by weight or less of the following component (E) and 0.15 part by weight or more and 5.0 parts by weight or less of the following component (F):

(A) a propylene-ethylene block copolymer A satisfying the following (a1) to (d1):

(a1) the amount of a room temperature decane-soluble part is 8 wt% or more and 35 wt% or less;

(b1) the room temperature decane-soluble part has a limiting viscosity [η] of 1.0 dl/g or more and 10.0 dl/g or less;

(c1) the amount of ethylene in the room temperature decane-soluble part is 33 mol% or more and 48 mol% or less;

(d1) the melt flow rate (MFR: 230°C, under the load of 2.16 kg) is 20g/10 min or more and 100g/10 min or less;

(B) A propylene-ethylene block copolymer B satisfying the following (a2) to (d2):

(a2) the amount of a room temperature decane-soluble part is 16 wt% or more and 35 wt% or less;

(b2) the room temperature decane-soluble part has a limiting viscosity [η] of 5.0 dl/g or more and 10.0 dl/g or less;

(c2) the amount of ethylene in the room temperature decane-soluble part is 36 mol% or more and 49 mol% or less;

(d2) the melt flow rate (MFR: 230°C, under the load of 2.16 kg) is 1g/10 min or more and less than 20g/10 min;

(C) an ethylene-α-olefin copolymer having a melt flow rate (230°C, under the load of 2.16 kg) of 0.5g/10 min or more and 20g/10 min or less;

(D) an inorganic filler having an average particle diameter of 1 μm or more and 14 μm or less;

(E) an acid-modified polypropylene; and

(F) a lubricant.

2. The polypropylene-based resin composition according to 1, wherein the amount of the room temperature decane-soluble part of the component (A) is 9 wt % or more and 28 wt % or less.

3. The polypropylene-based resin composition according to 1 or 2, wherein (b1) the room temperature decane-soluble part of the component (A) has a limiting viscosity [η] of 2.0 dl/g or more and 8.5 dl/g or less.

4. The polypropylene-based resin composition according to any of 1 to 3, wherein the amount of the component (B) is 20 parts by weight or more and 50 parts by weight or less.

5. The polypropylene-based resin composition according to any of 1 to 4, wherein (b2) the room temperature decane-soluble part of the component (B) has a limiting viscosity [η] of 6.5 dl/g or more and 8.5 dl/g or less.

6. The polypropylene-based resin composition according to any of 1 to 5, wherein the melt flow rate (230°C, under the load of 2.16 kg) of the component (A) is 25g/10 min or more and 95g/10 min or less.

7. The polypropylene-based resin composition according to any of 1 to 6, wherein the melt flow rate (230°C, under the load of 2.16 kg) of the component (B) is 10g/10 min or more and 18g/10 min or less.

8. The polypropylene-based resin composition according to any of 1 to 7, wherein the melt flow rate (230°C, under the load of 2.16 kg) is 10g/10 min or more and 45g/10 min or less.

9. The polypropylene-based resin composition according to any of 1 to 8, wherein the inorganic filler (D) is talc.

10. The polypropylene-based resin composition according to any of 1 to 9, wherein the lubricant (F) is an aliphatic acid amide.

11. In another aspect, there is provided a~~A~~ molded product obtained by molding the polypropylene-based resin composition as defined above~~according to any of 1 to 10~~.

12. The molded product according to 11 which is used for an instrumental panel of an automobile.

[0008]

According to the polypropylene-based resin composition of the disclosure~~invention~~, it is possible to obtain a molded product which has excellent mechanical property, hardly suffers generation of flow marks and has excellent low gloss property and scratch resistance.

Mode for Carry out the Invention

[0009]

The propylene-based resin composition comprises the following components (A) to (F):

(A) a propylene-ethylene block copolymer A: 100 parts by weight

(B) a propylene-ethylene block copolymer B: 18 parts by weight or more and 65 parts by weight or less

(C) an ethylene-α-olefin copolymer having a melt flow rate (230℃,under the load of 2.16kg) of 0.5g/10 min or more and 20g/10min or less : 6 parts by weight or more and 45 parts by weight or less

(D) an inorganic filler having an average particle diameter of 1 μm or more and 14 μm or less: 25 parts by weight or more and 60 parts by weight or less

(E) an acid-modified polypropylene: 0.1 parts by weight or more and 6.5 parts by weight or less

(F) a lubricant: 0.15 part by weight or more and 5.0 parts by weight or less

Due to the presence of the following components (A) to (F) in a prescribed amount, it is possible to obtain a molded product which hardly suffers flow marks or the like and has excellent low gloss property and scratch resistance.

Each component will be explained hereinbelow.

[0010]

CLAIMS

1. A polypropylene-based resin composition comprising 100 parts by weight of the following component (A), 18 parts by weight or more and 65 parts by weight or less of the following component (B), 6 parts by weight or more and 45 parts by weight or less of the following component (C), 25 parts by weight or more and 60 parts by weight or less of the following component (D), 0.1 part by weight or more and 6.5 parts by weight or less of the following component (E) and 0.15 part by weight or more and 5.0 parts or less by weight of the following component (F):

(A) a propylene-ethylene block copolymer A satisfying the following (a1) to (d1):

(a1) the amount of a room temperature decane-soluble part is 8 wt% or more and 35 wt% or less;

(b1) the room temperature decane-soluble part has a limiting viscosity [η] of 1.0 dl/g or more and 10.0 dl/g or less;

(c1) the amount of ethylene in the room temperature decane-soluble part is 33 mol% or more and 48 mol% or less;

(d1) the melt flow rate (MFR: 230°C, under the load of 2.16 kg) is 20g/10 min or more and 100g/10 min or less;

(B) A propylene-ethylene block copolymer B satisfying the following (a2) to (d2):

(a2) the amount of a room temperature decane-soluble part is 16 wt% or more and 35 wt% or less;

(b2) the room temperature decane-soluble part has a limiting viscosity [η] of 5.0 dl/g or more and 10.0 dl/g or less;

(c2) the amount of ethylene in the room temperature decane-soluble part is 36 mol% or more and 49 mol% or less;

(d2) the melt flow rate (MFR: 230°C, under the load of 2.16 kg) is 1g/10 min or more and less than 20g/10 min;

(C) an ethylene-α-olefin copolymer having a melt flow rate (230°C, under the load of 2.16 kg) of 0.5g/10 min or more and 20g/10 min or less;

(D) an inorganic filler having an average particle diameter of 1 μm or more and 14 μm or less;

(E) an acid-modified polypropylene; and

(F) a lubricant.

2. The polypropylene-based resin composition according to claim 1, wherein the amount of the room temperature decane-soluble part of the component (A) is 8 wt% or more and 28 wt% or less.

3. The polypropylene-based resin composition according to claim 1 ~~or 2~~, wherein the room temperature decane-soluble part of the component (A) has a limiting viscosity [η] of 2.0 dl/g or more and 8.5 dl/g or less.

4. The polypropylene-based resin composition according to ~~any of~~ claims 1 ~~to 3~~, wherein the amount of the component (B) is 20 parts by weight or more and 50 parts by weight or less.

5. The polypropylene-based resin composition according to ~~any of~~ claims 1 ~~to 4~~, wherein the room temperature decane-soluble part of the component (B) has a limiting viscosity [η] of 6.5 dl/g or more and 8.5 dl/g or less.

6. The polypropylene-based resin composition according to ~~any of~~ claims 1 ~~to 5~~, wherein the melt flow rate (230°C, under the load of 2.16 kg) of the component (A) is 25g/10 min or more and 95g/10 min or less.

7. The polypropylene-based resin composition according to ~~any of~~ claims 1 ~~to 6~~, wherein the melt flow rate (230°C, under the load of 2.16 kg) of the component (B) is 10g/10 min or more and 18g/10 min or less.

8. The polypropylene-based resin composition according to ~~any of~~ claims 1 ~~to 7~~, wherein the melt flow rate (230°C, under the load of 2.16 kg) is 10g/10 min or more and 45g/10 min or less.

9. The polypropylene-based resin composition according to ~~any of~~ claims 1 ~~to 8~~, wherein the inorganic filler (D) is talc.

10. The polypropylene-based resin composition according to ~~any of~~ claims 1 ~~to 9~~, wherein the lubricant (F) is an aliphatic acid amide.

11. A molded product obtained by molding the polypropylene-based resin composition according to ~~any of~~ claims 1 ~~to 10~~.

12. The molded product according to claim 11 which is used for an instrumental panel of an automobile.