and (B);

a lubricant (D), a phosphorus-based antioxidant (E), and a hindered phenol-based antioxidant (F),

wherein

the flame-retardant polyamide resin composition satisfies requirements described in the following (a) to (c):

(a) 10 ≤ terminal amino group concentration (eq/ton) of polyamide resin (A) ≤ 39

(b) melt flow rate (275°C, 1 kgf) ≥ 40

(c) 236°C ≤ temperature lowering crystallization temperature (Tc2) ≤ 242°C.

[2] The flame-retardant polyamide resin composition according to [1], wherein the polyamide resin (A) includes 45 to 75% by mass of a polyamide 66 resin (A1), 10 to 40% by mass of a polyamide 6 resin (A2), and 0 to 8% by mass of an amorphous polyamide resin (A3) based on a total amount of the polyamide resin (A).

[3] The flame-retardant polyamide resin composition according to [1] or [2], further including 0.01 to 1 parts by mass of the lubricant (D), 0.01 to 1 parts by mass of the phosphorus-based antioxidant (E), and 0.01 to 1 parts by mass of the hindered phenol-based antioxidant (F) based on 100 parts by mass of the flame-retardant polyamide resin

composition.

[4] The flame-retardant polyamide resin composition according to [3], wherein the phosphorus-based antioxidant (E) is a compound having a pentaerythritol diphosphite skeleton.

[5] The flame-retardant polyamide resin composition according to any one of [1] to [4], wherein the flame-retardant polyamide resin composition is used for a hinge member.

[6] A molded article having a hinge part, the molded article including the flame-retardant polyamide resin composition according to any one of [1] to [4].

[7] The molded article according to [6], wherein the molded article having a hinge part is any one of a ferrite core cover, a binding band, and an electric wiring protection member.

[8] A method for producing a flame-retardant polyamide resin composition according to any one of [1] to [4], the method comprising the step of melt-kneading a polyamide resin (A), melamine cyanurate (B) and a metal hypophosphite (C).

elements and a metal such as tin or lead, and one kind or two or more kinds thereof may be used in combination. Among them, sodium hypophosphite (NaH_2PO_2) and calcium hypophosphite ($Ca(H_2PO_2)_2$) are preferable from the viewpoint that the effect of delaying a crystallization rate by an amide exchange reaction can be more remarkably achieved. The metal hypophosphite may be a hydrate, and examples thereof include sodium hypophosphite monohydrate ($NaH_2PO_2 \cdot H_2O$).

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The blending amount of the metal hypophosphite (C) is 0.01 to 2 parts by mass, preferably 0.05 to 1.5 parts by mass, and more preferably 0.1 to 1.0 parts by mass, based on 100 parts by mass of a total of the polyamide resin (A) and the melamine cyanurate (B). When the amount of the metal hypophosphite is within a specific range, an amide exchange reaction between the polyamide resins is promoted, which is preferable for stabilizing resin properties.

[0028]

In order to improve the moldability, discoloration resistance, and thermal stability and the like of the resin composition of the present invention, the resin composition preferably contains a lubricant (D), a phosphorus-based antioxidant (E), and a hindered phenol-based antioxidant (F) and the like.

CLAIMS

Claim 1. A flame-retardant polyamide resin composition comprising:

97.5 to 93 parts by mass of a polyamide resin (A);

2.5 to 7 parts by mass of a melamine cyanurate (B); and 0.01 to 2 parts by mass of a metal hypophosphite (C) based on 100 parts by mass of a total of the components (A) and (B), wherein

the flame-retardant polyamide resin composition satisfies requirements described in the following (a) to (c):

(a) $10 \leq$ terminal amino group concentration (eq/ton) of polyamide resin (A) ≤ 39

(b) melt flow rate (275°C, 1 kgf) ≥ 40

(c) 236°C $\leq$ temperature lowering crystallization temperature (Tc2) $\leq$ 242°C.

Claim 2. The flame-retardant polyamide resin composition according to claim 1, wherein the polyamide resin (A) comprises 45 to 75% by mass of a polyamide 66 resin (A1), 10 to 40% by mass of a polyamide 6 resin (A2), and 0 to 8% by mass of an amorphous polyamide resin (A3) based on a total amount of the polyamide resin (A).

Claim 3. The flame-retardant polyamide resin composition according to claim 1 or 2, further comprising 0.01 to 1 parts by mass of a lubricant (D), 0.01 to 1 parts by mass of a phosphorus-based antioxidant (E), and 0.01 to 1 parts by mass of a hindered phenol-based antioxidant (F) based on 100 parts by mass of the flame-retardant polyamide resin composition.

Claim 4. The flame-retardant polyamide resin composition according to claim 3, wherein the phosphorus-based antioxidant (E) is a compound having a pentaerythritol diphosphite skeleton.

Claim 5. The flame-retardant polyamide resin composition according to any one of claims 1 to 4, wherein the flame-retardant polyamide resin composition is used for a hinge member.

Claim 6. A molded article having a hinge part, the molded article comprising the flame-retardant polyamide resin composition according to any one of claims 1 to 4.

Claim 7. The molded article according to claim 6,

wherein the molded article having a hinge part is any one of a ferrite core cover, a binding band, and an electric wiring protection member.

Claim 8. A method for producing a flame-retardant polyamide resin composition according to any one of claims 1 to 4, the method comprising the step of melt-kneading a polyamide resin (A), melamine cyanurate (B) and a metal hypophosphite (C).