Claims

[Claim 1]

A prepreg comprising:

a thermosetting resin composition (C) comprising a thermosetting resin (A), and an inorganic filler (B); and

a glass cloth (D) impregnated or coated with the thermosetting resin composition (C);

wherein the glass cloth (D) satisfies the following expressions (I) to (III),

$(x+y) \leq 95$ (I)

$1.9 < (X+Y) / (x+y)$ (II)

$t < 14$ (III)

wherein the glass cloth (D) is defined by X (threads/inch) representing number of warp yarn per inch; Y (threads/inch) representing number of weft yarn per inch; x (threads) representing number of filament per the warp yarn; y (threads) representing number of filament per the weft yarn; and t (μm) representing a thickness, and

wherein a content of the inorganic filler (B) in the thermosetting resin composition (C) is from 110 to 700 parts by mass based on 100 parts by mass of the thermosetting resin (A),

wherein an average value of the average filament diameter r (μm) of the warp yarn and the weft yarn is from 2.5 to 4.5 μm.

[Claim 2]

The prepreg according to claim 1, wherein the content of the inorganic filler (B) is from 38 to 88 parts by mass based on 100 parts by mass of the thermosetting resin composition (C).

[Claim 3]

The prepreg according to claim 1 or 2, wherein the value of x+y in the glass cloth (D) is 50 or more.

[Claim 4]

The prepreg according to any one of claims 1 to 3, wherein the value of (X+Y) / (x+y) in the glass cloth (D) is 7.0 or less.

[Claim 5]

The prepreg according to any one of claims 1 to 4, wherein the thickness t (μm) of the glass cloth (D) is 8 μm or more.

[Claim 6]

The prepreg according to any one of claims 1 to 5, wherein when r (μm) represents an average filament diameter of the warp yarn and the weft yarn, the thickness t (μm) of the glass cloth (D) is less than 4r.

[Claim 7]

The prepreg according to any one of claims 1 to 6, wherein the value of X/Y of the glass cloth (D) is from 0.85 to 1.15.

[Claim 8]

The prepreg according to any one of claims 1 to 7, wherein when W (g/m^2) represents a mass per unit area of the glass cloth (D), the value of W/t ($g/\mu m \cdot m^2$) is less than 1.0.

[Claim 9]

The prepreg according to any one of claims 1 to 8, wherein the thermosetting resin (A) comprises a cyanic acid ester compound and/or a maleimide compound.

[Claim 10]

The prepreg according to any one of claims 1 to 9, wherein the thermosetting resin (A) comprises a bismaleimide triazine resin.

[Claim 11]

The prepreg according to any one of claims 1 to 10, wherein the volume content of the glass cloth (D) in the prepreg is from 21% by volume to 35% by volume

[Claim 12]

The prepreg according to any one of claims 1 to 11, wherein the inorganic filler (B) comprises one or more selected from the group consisting of silica, boehmite, and alumina.

[Claim 13]

A metal foil-clad laminate comprising the prepreg according to any one of claims 1 to 12, and a metal foil laminated on a single face or both faces of the prepreg.

[Claim 14]

A printed wiring board made by using the prepreg according to any one of claims 1 to 12 as a build-up material.

[Claim 15]

A multilayer printed wiring board made by using the metal foil-clad laminate according to claim 13 as a lamination material.

[Claim 16]

A component embedded multilayer printed wiring board obtained by using the prepreg according to any one of claims 1 to 12 as a build-up material, and placing a component for a semiconductor use and a metal line in a base layer.

[Claim 17]

A printed wiring board made by using the prepreg according to any one of claims 1 to 12 as an insulation layer.