CLAIMS

[Claim 1]

An adhesive sheet comprising:

an acrylic adhesive layer is formed of an adhesive composition comprising an acrylic polymer (A),

wherein a stress relaxation rate (X0) is 0.20 or less, and

wherein the stress relaxation rate (X0) is calculated by the following equation (I) from an initial modulus of elasticity ($G_0'(0)$) at 0.1 seconds after application of a strain of 25% to the acrylic adhesive layer at a temperature of 70°C and a relaxation modulus of elasticity ($G_0'(300)$) at 300 seconds after application of a strain of 25% to the acrylic adhesive layer at a temperature of 70°C:

Stress relaxation rate (X0) = ($G_0'(300)/G_0'(0)$) ⋯ (I).

[Claim 2]

An adhesive sheet comprising:

an acrylic adhesive layer,

wherein the acrylic adhesive layer is a cured reaction product formed of a syrup composition comprising an alkyl (meth)acrylate (a1) having an alkyl group with 3 to 30 carbon atoms, and a hydroxyl group-containing monomer (a2) and/or a nitrogen-containing monomer (a3),

wherein a stress relaxation rate (X0) is 0.20 or less, and

wherein the stress relaxation rate (X0) is calculated by the following equation (I) from an initial modulus of elasticity ($G_0'(0)$) at 0.1 seconds

after application of a strain of 25% to the acrylic adhesive layer at a temperature of 70°C and a relaxation modulus of elasticity ($G_0'(300)$) at 300 seconds after application of a strain of 25% to the acrylic adhesive layer at a temperature of 70°C:

Stress relaxation rate (X0) = ($G_0'(300)/G_0'(0)$) ··· (I).

[Claim 3]

The adhesive sheet according to claim 1 or 2, wherein the relaxation modulus of elasticity ($G_0'(0)$) is from 5 to 100 kPa.

[Claim 4]

The adhesive sheet according to any one of claims 1 to 3, wherein the relaxation modulus of elasticity ($G_0'(300)$) is from 0.1 to 20 kPa.

[Claim 5]

The adhesive sheet according to any one of claims 1 to 4, wherein a shear storage modulus of elasticity at a temperature of 25°C ($G_0'(25°C)$) as obtained by dynamic viscoelasticity measurement in a shear mode at a frequency of 1 Hz is 100 kPa or more.

[Claim 6]

The adhesive sheet according to any one of claims 1 to 5, wherein a glass transition temperature (Tg_0) defined by a maximum value of Tanδ as obtained by dynamic viscoelasticity measurement in a shear mode at a frequency of 1 Hz is -25°C or higher.

[Claim 7]

The adhesive sheet according to any one of claims 1 to 6, wherein the adhesive sheet has active energy ray curability.

[Claim 8]

The adhesive sheet according to claim 7,

wherein the adhesive sheet is irradiated with an active energy ray having a wavelength of 365 nm in such a manner that a cumulative light quantity is 2000 to 4000 mJ/cm^2,

wherein a post-curing stress relaxation rate (X1) is 0.22 or more, and

wherein the post-curing stress relaxation rate (X1) is calculated by the following equation (II) from a post-curing initial modulus of elasticity ($G_1'(0)$) at 0.1 seconds after application of a strain of 25% to the acrylic adhesive layer at a temperature of 70°C and a post-curing relaxation modulus of elasticity ($G_1'(300)$) at 300 seconds after application of a strain of 25% to the acrylic adhesive layer at a temperature of 70°C:

Post-curing stress relaxation rate (X1) = $(G_1'(300)/G_1'(0))$ ··· (II).

[Claim 9]

The adhesive sheet according to claim 8, wherein a difference (X1 - X0) between the post-curing stress relaxation rate (X1) and the stress relaxation rate (X0) is 0.01 or more.

[Claim 10]

The adhesive sheet according to any one of claims 7 to 9,

wherein when the adhesive sheet is irradiated with an active energy ray having a wavelength of 365 nm in such a manner that a cumulative light quantity is 2000 to 4000 mJ/cm^2, and

wherein the post-curing initial modulus of elasticity ($G_1'(0)$) at 0.1 seconds after application of a strain of 25% to the acrylic adhesive layer at a temperature of 70°C is 1 kPa or more and 100 kPa or less.

[Claim 11]

The adhesive sheet according to any one of claims 7 to 10,

wherein when the adhesive sheet is irradiated with an active energy ray having a wavelength of 365 nm in such a manner that a cumulative light quantity is 2000 to 4000 mJ/cm^2, and

wherein the post-curing relaxation modulus of elasticity ($G_1'(300)$) at 300 seconds after application of a strain of 25% to the acrylic adhesive layer at a temperature of 70°C is 0.1 kPa or more and 50 kPa or less.

[Claim 12]

An adhesive sheet formed of an adhesive composition comprising:

an acrylic polymer (A),

wherein a glass transition temperature (Tg_0) defined by a maximum value of Tanδ as obtained by dynamic viscoelasticity measurement in a shear mode at a frequency of 1 Hz is from -40 to 20°C, and

wherein a difference (ΔT) between a temperature (T1) and a

temperature (T2) is 20°C or more,

wherein the temperature (T1) is a temperature equal to or lower than the glass transition temperature (Tg_0), and a temperature at which a shear storage modulus of elasticity (G') and a loss modulus of elasticity (G'') are equal to each other, and

wherein the temperature (T2) is a temperature equal to or higher than the glass transition temperature (Tg_0), and a temperature at which the shear storage modulus of elasticity (G') and the loss modulus of elasticity (G'') are equal to each other.

[Claim 13]

The adhesive sheet according to claim 12, wherein the maximum value of Tanδ is 1.2 or more.

[Claim 14]

The adhesive sheet according to claim 12 or 13, wherein a shear storage modulus of elasticity at a temperature of 25°C ($G_0'(25°C)$) as obtained by the dynamic viscoelasticity measurement in a shear mode at a frequency of 1 Hz is 50 kPa or more.

[Claim 15]

The adhesive sheet according to any one of claims 12 to 14, wherein the adhesive sheet has active energy ray curability.

[Claim 16]

The adhesive sheet according to claim 15,

wherein when the adhesive sheet is irradiated with an active energy ray having a wavelength of 365 nm in such a manner that a cumulative light quantity is 2000 to 4000 mJ/cm^2, and

wherein a shear storage modulus of elasticity at a temperature of 25°C ($G_1'(25°C)$) as obtained by dynamic viscoelasticity measurement in a shear mode at a frequency of 1 Hz is 60 kPa or more.

[Claim 17]

The adhesive sheet according to claim 15 or 16,

wherein when the adhesive sheet is irradiated with an active energy ray having a wavelength of 365 nm in such a manner that a cumulative light quantity is 2000 to 4000 mJ/cm^2, and

wherein a shear storage modulus of elasticity at a temperature of 85°C ($G_1'(85°C)$) as obtained by dynamic viscoelasticity measurement in a shear mode at a frequency of 1 Hz is 10 kPa or more.

[Claim 18]

The adhesive sheet according to any one of claims 1 to 17, wherein the adhesive sheet has a gel fraction of 30 to 90%.

[Claim 19]

The adhesive sheet according to any one of claims 1 to 18, wherein the adhesive composition or the syrup composition comprises a crosslinking agent (B) and/or a photoinitiator (C).

[Claim 20]

The adhesive sheet according to any one of claims 1 to 19,

wherein the adhesive composition or the syrup composition comprises a photoinitiator (C),

wherein the photoinitiator (C) comprises a photoinitiator (c1) having a radically polymerizable functional group having a carbon-carbon double bond and a structure that generates a radical in a molecule, and a hydrogen abstraction type photoinitiator (c2) besides the photoinitiator (c1).

[Claim 21]

The adhesive sheet according to any one of claims 1 to 20, wherein the acrylic polymer (A) has a constituent unit derived from a nitrogen-containing monomer (a3).

[Claim 22]

An adhesive sheet with a release film, comprising:

the adhesive sheet according to any one of claims 1 to 21, wherein the release film is laminated on the adhesive sheet.

[Claim 23]

A laminate for an image display device, the laminate comprising:

two image display device constituent members and the adhesive sheet according to any one of claims 1 to 21, is interposed between the

two image display device constituent members,

wherein one of the two image display device constituent members is a surface protection panel, and

wherein the other is a member formed of any one or a combination of two or more of the group consisting of a touch sensor film, an image display panel, a color filter, a polarizing element, and a retardation film.

[Claim 24]

The laminate for an image display device according to claim 23,

wherein the surface protection panel has a frame-shaped concealing portion in a peripheral edge thereof, and

wherein the frame has a portion having a width of 3 mm or less.

[Claim 25]

The laminate for an image display device according to claim 23 or 24, wherein the laminate is fixed in a state of having a curved face shape.

[Claim 26]

An image display device comprising the laminate for the image display device according to any one of claims 23 to 25.

[Claim 27]

An adhesive sheet for an image display device constituent member, the adhesive sheet comprising the adhesive sheet according to any one of claims 1 to 21.