Claims

[Claim 1]

A stress distributing film, comprising a laminate of a plastic film and a pressure-sensitive adhesive layer, wherein

the plastic film has a thickness of from 15 μm to 300 μm;

the pressure-sensitive adhesive layer has a thickness of from 1 μm to 300 μm;

the pressure-sensitive adhesive layer is formed of a pressure-sensitive adhesive composition;

the pressure-sensitive adhesive composition contains a polymer (A) having a monomer unit (I) derived from a (meth)acrylic acid alkyl ester having an alkyl group having 1 to 20 carbon atoms as an alkyl ester moiety and a monomer unit (II) derived from a (meth)acrylic acid ester having a OH group and/or a COOH group in a molecule thereof or a rubber-based resin, and wherein the pressure-sensitive adhesive composition does not contain a polymer (B) having a monomer unit derived from an alicyclic structure-containing (meth)acrylic acid ester represented by the general formula (1), the polymer having a weight-average molecular weight of 1,000 or more and less than 30,000:

$CH_2=C(R^1)COOR^2\cdots(1)$

in the general formula (1), R^1 represents a hydrogen atom or a methyl group, and R^2 represents a hydrocarbon group having an alicyclic structure;

the pressure-sensitive adhesive composition satisfies a

relationship of ([NCO]+[epoxy])/([OH]+[COOH])<0.05, where [NCO] represents a molar content of an NCO group in the pressure-sensitive adhesive composition, [epoxy] represents a molar content of an epoxy group in the pressure-sensitive adhesive composition, [OH] represents a molar content of a OH group in the pressure-sensitive adhesive composition, and [COOH] represents a molar content of a COOH group in the pressure-sensitive adhesive composition;

an indentation energy required when a load is applied from a plastic film side of the laminate in a direction vertical to the laminate is from 260 μJ to 7000 μJ;

the indentation energy is measured "SAICAS MODEL DN-20" manufactured by Daipla Wintes Co., Ltd. at a measurement temperature of 25°C and an indentation speed of 5 μm/sec in accordance with the following procedures:

(a procedure 1)

the pressure-sensitive adhesive layer side of the laminate was bonded to a flat indenter (load detection side), the plastic film side of the laminate bonded to the flat indenter was indented into a spherical indenter, and an indentation depth (μm) when a load of 20 N was detected was calculated; and

(a procedure 2)

the pressure-sensitive adhesive layer side of the laminate was bonded to a slide glass, a spherical indenter was indented from the plastic film side (load detection side) of the laminate bonded to the slide glass to the indentation depth determined in the procedure

1; and

when a vertical load applied to the spherical indenter was represented by y=f(x) (x: indentation depth), the indentation energy W (μJ) until the application of a load of 20 N to the pressure-sensitive adhesive layer side of the laminate was calculated by the following equation:

$$W(\mu J) = \int_0^r f(x) \cdot dx$$

wherein r represents an indentation depth when a load of 20 N is applied to the pressure-sensitive adhesive layer side of the laminate.

[Claim 2]

The stress distributing film according to claim 1, wherein the plastic film has a thickness of from 20 μm to 300 μm.

[Claim 3]

The stress distributing film according to claim 1 or 2, wherein the pressure-sensitive adhesive layer has a thickness of from 1 μm to 150 μm.

[Claim 4]

The stress distributing film according to any one of claims

1 to 3, wherein the pressure-sensitive adhesive composition contains an organic polyisocyanate-based cross-linking agent that is bifunctional or more and/or an epoxy-based cross-linking agent.

[Claim 5]

The stress distributing film according to any one of claims 1 to 4, wherein the pressure-sensitive adhesive layer has a loss tangent tanδ in an entire temperature region of from -40°C to 150°C of 0.10 or more.

[Claim 6]

An optical member, comprising the stress distributing film of any one of claims 1 to 5.

[Claim 7]

An electronic member, comprising the stress distributing film of any one of claims 1 to 5.