CLAIMS

[Claim 1] A warming device, comprising a first sheet, a second sheet, a heat-generating layer, and a water-retention layer,

the heat-generating layer comprising an oxidizable metal, a carbon component, and water, and

the water-retention layer comprising one, or two or more selected from: a dispersion layer that is a continuous layer of a thermoplastic resin in which a water-absorbent polymer is dispersed; and a continuous layer of a thermoplastic water-absorbent resin,

wherein the water-retention layer retains water,

the heat-generating layer and the water-retention layer are adjacent to each other and are disposed in a closed space, the closed space being sandwiched between the first sheet and the second sheet,

the first sheet is air-permeable, and

in a plan view, the heat-generating layer and the water-retention layer are smaller in area than the first sheet and the second sheet, and a flap portion where the first sheet and the second sheet overlap is provided outside outer peripheral edges of the heat-generating layer and the water-retention layer.

[Claim 2] The warming device according to claim 1, wherein the heat-generating layer is in contact with the first sheet.

[Claim 3] The warming device according to claim 1, wherein the water-retention layer is in contact with the first sheet, and in a plan view from a side of the first sheet, an area of the water-retention layer is smaller than an area of the heat-generating layer.

[Claim 4] The warming device according to any one of claims 1 to 3, wherein the water-retention layer comprises the dispersion layer, and the dispersion layer comprises one, or two or more selected from a water-soluble resin and sodium chloride.

[Claim 5] The warming device according to any one of claims 1 to 4, wherein the water-retention layer comprises the dispersion layer, and the dispersion layer comprises a surfactant.

[Claim 6] The warming device according to claim 5, wherein a content proportion of the surfactant relative to the mass of the entire water-retention layer is 0.1 mass% or more and 3 mass% or less, and preferably 1 mass% or less.

[Claim 7] The warming device according to any one of claims 1 to 6, wherein the water-retention layer comprises the dispersion layer, and the dispersion layer comprises an arrangement configuration in which the water-absorbent polymers adjacent to each other are in contact with each other.

[Claim 8] The warming device according to claim 7, wherein the water-absorbent polymers comprise polymers exposed to a surface of the dispersion layer, the surface on a side of the heat-generating layer.

[Claim 9] The warming device according to any one of claims 1 to 8, wherein the water-retention layer comprises the dispersion layer, and the dispersion layer comprises a cracked portion at a surface on a side of the heat-generating layer.

[Claim 10] The warming device according to any one of claims 1 to 9, wherein the water-retention layer comprises one, or two or more selected from: the dispersion layer that is a plurality of the continuous layers of a thermoplastic resin in which a water-absorbent

polymer is dispersed; and a plurality of the continuous layers of a thermoplastic water-absorbent resin.

[Claim 11] The warming device according to any one of claims 1 to 10, wherein the continuous layer includes a state filled with a resin component to form the entire layer even when including a crack.

[Claim 12] The warming device according to any one of claims 1 to 11, wherein the thermoplastic resin is a hot-melt material.

[Claim 13] The warming device according to any one of claims 1 to 12, wherein the dispersion layer that is the continuous layer of the thermoplastic resin in which the water-absorbent polymer is dispersed is a layer in which the thermoplastic resin fills inside of the layer while comprising the water-absorbent polymer, and the continuous layer of the thermoplastic water-absorbent resin is a layer in which the thermoplastic water-absorbent resin fills inside of the layer.

[Claim 14] A warming device, comprising a first sheet, a second sheet, a heat-generating layer, and a water-retention layer,

the heat-generating layer comprising an oxidizable metal, a carbon component, and water, and

the water-retention layer comprising one, or two or more selected from: a layer in which a thermoplastic resin fills inside of the layer while comprising the water-absorbent polymer; and a layer in which a thermoplastic water-absorbent resin fills inside of the layer

wherein the water-retention layer retains water,

the heat-generating layer and the water-retention layer are adjacent to each other and are disposed in a closed space, the closed space being sandwiched between the first sheet and the second sheet,

the first sheet is air-permeable, and

in a plan view, the heat-generating layer and the water-retention layer are smaller in area than the first sheet and the second sheet, and a flap portion where the first sheet and the second sheet overlap is provided outside outer peripheral edges of the heat-generating layer and the water-retention layer.

[Claim 15] A method for manufacturing a warming device, the method comprising:

applying a coating material comprising an oxidizable metal, a carbon component, and water onto one surface of a first raw material sheet;

applying: a slurry of a molten thermoplastic resin comprising a water-absorbent polymer; and/or a molten thermoplastic water-absorbent resin onto one surface of a second raw material sheet; and

bonding the first raw material sheet and the second raw material sheet in such a way that coated surfaces of the first raw material sheet and the second raw material sheet face each other,

wherein one or both selected from the first raw material sheet and the second raw material sheet are air-permeable sheets.

[Claim 16] The method for manufacturing a warming device according to claim 15, wherein the method comprises applying the slurry onto one surface of the second raw material sheet, and

the slurry comprises one, or two or more selected from a water-soluble resin and sodium chloride.

[Claim 17] The method for manufacturing a warming device according to claim 15 or 16, wherein the method comprises:

applying the slurry onto one surface of the second raw material sheet; and

a ratio of a mass proportion of the thermoplastic resin to a mass proportion of the water-absorbent polymer, the sodium chloride, and the water-soluble resin, (mass proportion of the thermoplastic resin/(mass proportion of the water-absorbent polymer +

mass proportion of the sodium chloride + mass proportion of the water-soluble resin)), accounting for a total mass of the slurry, is 0.5 or more and 5 or less, preferably 0.8 or more and 3 or less, and more preferably 1.3 or more and 2 or less.