CLAIMS

[Claim 1]

A hydrogenated petroleum resin containing hydrogenated low-molecular weight material in an amount of 6 to 10% by mass, and having the content of a volatile organic compound component of less than 100 wt ppm.

[Claim 2]

The hydrogenated petroleum resin according to claim 1, wherein the content of the volatile organic compound component is less than 10 wt ppm.

[Claim 3]

The hydrogenated petroleum resin according to claim 1 or 2, wherein the petroleum resin having the content of a volatile organic compound component of less than 100 wt ppm is one resulting from hydrogenation.

[Claim 4]

The hydrogenated petroleum resin according to claim 3, wherein the petroleum resin is one resulting from thermal polymerization of at least one selected from the group consisting of cyclopentadiene and dicyclopentadiene, and styrene.

[Claim 5]

A hot melt adhesive composition comprising at least one selected from the group consisting of the petroleum resin having the content of a volatile organic compound component of less than 100 wt ppm and the hydrogenated petroleum resin according to any one of claims 1 to 4.

[Claim 6]

The hot melt adhesive composition according to claim 5, further comprising a thermoplastic compound.

[Claim 7]

The hot melt adhesive composition according to claim 6, wherein the thermoplastic compound is at least one selected from the group consisting of a

styrene polymer, an ethylene-vinyl acetate copolymer (EVA), a styrene-butadiene-styrene block copolymer (SBS), a styrene-isoprene-styrene block copolymer (SIS), a natural rubber, an amorphous poly-α-olefin (APAO), a styrene-ethylene-butylene-styrene rubber (SEBS), and a styrene-ethylene-propylene-styrene rubber (SEPS).

[Claim 8]

A method for producing a hydrogenated petroleum resin comprising a copolymerization reaction step of subjecting a cyclopentadiene-based compound and a vinyl aromatic compound to a copolymerization reaction in the presence of a polymerization solvent; a step of performing a removal treatment of a volatile component which is contained in a copolymerization reaction product liquid obtained in the copolymerization reaction step, to obtain a petroleum resin; a hydrogenation reaction step of subjecting the petroleum resin to a hydrogenation reaction in the presence of a hydrogenation solvent; a step of performing a removal treatment of an unreacted component and a volatile component which are contained in a hydrogenation reaction product liquid obtained in the hydrogenation reaction step, to obtain a hydrogenated petroleum resin concentrate; and a removal step of a volatile organic compound component by removing a volatile organic compound component from the hydrogenated petroleum resin concentrate, to obtain a hydrogenated petroleum resin containing 6 to 10% by mass of a hydrogenated low-molecular weight material, wherein

the removal step of a volatile organic compound component is constituted of a first step of supplying the hydrogenated petroleum resin into a thin film distillation apparatus, to control the content of the volatile organic compound component to less than 2,000 wt ppm; and a second step of supplying the hydrogenated petroleum resin having passed the first step into a nitrogen-stripping apparatus or a steam distillation apparatus, to control the content of the volatile organic compound component to less than 100 wt ppm.

[Claim 9]

The method for producing a hydrogenated petroleum resin according to claim 8, wherein the content of the hydrogenated low-molecular weight material which is contained in the hydrogenated petroleum resin in the hydrogenated petroleum resin concentrate is 7 to 13% by mass in 100% by mass of the

hydrogenated petroleum resin containing the hydrogenated low molecular material.

[Claim 10]

The method for producing a hydrogenated petroleum resin according to claim 8 or 9, wherein in the thin film distillation apparatus, a treatment temperature is 100 to 300°C, a treatment pressure is 0.1 to 15 kPa, and a treatment time is 5 to 180 minutes.

[Claim 11]

The method for producing a hydrogenated petroleum resin according to any one of claims 8 to 10, wherein in the nitrogen-stripping apparatus or the steam distillation apparatus, a treatment temperature is 150 to 300°C, a treatment pressure is 0.5 to 150 kPa, a nitrogen or steam flow rate is 100 to 1,000,000 mL/min relative to 100% by mass of the hydrogenated petroleum resin, and a treatment time is 10 to 180 minutes.

[Claim 12]

The method for producing a hydrogenated petroleum resin according to any one of claims 8 to 11, wherein a molecular weight of the hydrogenated low-molecular weight material which is contained in the hydrogenated petroleum resin is 200 to 350.

[Claim 13]

The method for producing a hydrogenated petroleum resin according to any one of claims 8 to 12, wherein the nitrogen-stripping apparatus is a rotary evaporator or a flash drum, and the steam distillation apparatus is a flash drum or a stripping tower.