CLAIMS

We claim:

1. A composition comprising

(A) a propylene-based copolymer having

(i) a density of 0.850 g/cc to 0.900 g/cc, and

(ii) a melt viscosity of 10,000 mPa•s or less at 177 °C;

(B) a rosin ester 1 wt% to 19 wt% comprising

(i) an aliphatic carbon of at least 75 mol% based on the total number of moles of carbon in the rosin ester; and

(ii) an ester-based carbon of 3.0 mol% or less based on the total number of moles of carbon in the rosin ester, and having a ring and ball softening temperature of 92 °C to 100 °C; and

(C) a wax, and

having a thermal stress of at least 55 °C.

2. The composition of claim 1, wherein the rosin ester comprises an aliphatic carbon of 75 mol% to 95 mol% based on the total number of moles of carbon in the rosin ester.

3. The composition of claim 1 or 2, wherein the rosin ester comprises an ester-based carbon of 0.5 mol% to 3.0 mol% based on the total number of moles of carbon in the rosin ester.

4. The composition of claim 1 or 2, wherein the wax is a propylene-based polymer having a melt viscosity of 40 mPa•s to 100 mPa•s at 170 °C and a density of 0.88 g/cc to 0.92 g/cc.

5. The composition of claim 4, wherein the weight ratio of the propylene-based copolymer to the propylene-based polymer wax is 2.0:1.0 to 5.0:1.0.

6. The composition of claim 4, wherein the weight ratio of the rosin ester to the propylene-based polymer wax is 0.4:1.0 to 1.0:1.0.

7. The composition of claim 1 or 2, wherein the combined amount of the (A) propylene-based copolymer and the (B) rosin ester is at least 60 wt% of the composition.

8. The composition of claim 1 or 2, wherein the weight ratio of the (A) propylene-based copolymer and the (B) rosin ester is 3.0:1.0 to 6.0:1.0.

9. The composition of claim 4, comprising

(A) a propylene-based copolymer of 55 wt% to 85 wt%, having (i) a melting temperature of 90 °C to 100 °C and (ii) a melt viscosity of at least 500 mPa•s and less than 3,000 mPa•s at 177 °C;

(B) the rosin ester of 10 wt% to 19 wt%; and

(C) a wax of 1 wt% to 25 wt%,

wherein each wt% is based on the weight of the composition; wherein the composition has a melt viscosity of 500 mPa•s to 3,000 mPa•s at 177 °C.