CLAIMS

1. An extrusion coating composition blend, comprising:

(a) from 3 wt% to 15 wt% of at least one homopolypropylene resin that has a melt flow rate of from 2 to 100 g/10min at 230°C;

(b) from 70 wt% to 92 wt% of a propylene random copolymer or terpolymer having a melt flow rate of from 2 to 30g/10min at 230° C; and

(c) from 5 wt% to 15 wt% of a low density polyethylene having a density of 0.910 to 0.940 g/cm^3 and a melt flow rate of from 4 to 70 g/10min at 190° C, wherein

the blend has a melt flow rate of from 7 to 50 g/10min at 230°C, and a Tm of from 120°C to 165°C.

2. The blend of Claim 1, wherein:

(a) the at least one homopolypropylene resin has a melt flow rate of from 3 to 50 g/10min at 230°C; and/or

(b) the propylene random copolymer or terpolymer has a melt flow rate of from 3 to 15g/10min at 230°C.

3. The blend of Claim 1, wherein:

(a) the at least one homopolypropylene resin has a melt flow rate of from 4 to 20 g/10min at 230°C (e.g. from 5 to 10 g/10min at 230°C, such as 7 g/10min at 230°C); and/or

(b) the propylene random copolymer or terpolymer has a melt flow rate of from 4 to 10 g/10min at 230°C (e.g. from 5.5 to 7 g/10min at 230°C).

4. The blend of any one of the preceding claims, wherein the blend has a melt flow rate of from 8 to 49 g/10min at 230°C, and a Tm of from 123°C to 145°C.

5. The blend of Claim 4, wherein the blend has a melt flow rate of from 15 to 30 g/10min at 230°C, and a Tm of from 125°C to 135°C (e.g. the blend has a melt flow rate of from 18 to 25 g/10min at 230°C, and a Tm of from 128°C to 133°C).

6. The blend of any one of the preceding claims, wherein the low density polyethylene has a melt flow rate of from 10 to 50 g/10min at 190°C (e.g. from 15 to 40 g/10min at 190°C, such as from 21 to 35 g/10min at 190°C).

7. The blend of any one of the preceding claims, wherein the at least one homopolypropylene has a melting temperature (Tm) in the range of from 150°C to 170°C (e.g. from 160°C to 169°C, such as 167°C).

8. The blend of any one of the preceding claims, wherein the at least one homopolypropylene further comprises ethylene and/or a C_4-C_{10} α-olefin in a total amount of less than 1 wt% relative to the total weight of the homopolypropylene resin used.

9. The blend of any one of the preceding claims, wherein the propylene random copolymer or terpolymer has a Tm of from 120°C to 135°C (e.g. from 125°C to 135°C, such as from 130°C to 135°C).

10. The blend of any one of the preceding claims, wherein in the propylene random copolymer or terpolymer the non-propylene monomers are selected from the group consisting of ethylene and a C_4-C_{10} α-olefin.

11. The blend of Claim 10, wherein the propylene random copolymer or terpolymer is a terpolymer.

12. The blend of Claim 11, wherein the propylene random copolymer or terpolymer is a propylene-ethylene-but-1-ene terpolymer.

13. The blend of Claim 12, wherein the propylene-ethylene-but-1-ene terpolymer has an ethylene content of from 1.0 wt% to 5.0 wt% and a but-1-ene content of from 3.0 wt% to 15 wt%.

14. The blend of Claim 13, wherein the propylene-ethylene-but-1-ene terpolymer has an ethylene content of about 2.6 wt% and a but-1-ene content of about 7.0 wt%.

15. The blend of any one of the preceding claims, wherein the low density polyethylene has a density of from 0.916 to 0.920 g/cm^3 (e.g. a density of 0.917 g/cm^3).

16. The blend of any one of the preceding claims, wherein

(a) the at least one homopolypropylene resin is present in an amount of from 3 wt% to 10 wt% (e.g. from 5 wt% to 9 wt%); and/or

(b) the propylene copolymer or terpolymer is present in an amount of from 70 wt% to 90 wt% (e.g. 80 wt% to 84 wt%); and/or

(c) the low density polyethylene is present in an amount of from 10 wt% to 12 wt%.

17. The blend of any one of the preceding claims, wherein the at least one homopolypropylene resin, the propylene random copolymer or terpolymer and the low density polyethylene together form a polymeric component and the blend further comprises an organic peroxide is present in an amount of from 0.010 to 0.50 parts by weight, per 100 parts by weight of the polymeric component (e.g. from 0.020 to 0.040 parts by weight per 100 parts by weight of the polymeric component).

18. The blend of any one of the preceding claims, wherein the organic peroxide is selected from the group consisting of hydroperoxides, dialkyl peroxides, diacyl peroxides, peroxydicarbonates, peroxyesters, ketone peroxides, peroxyketals, and alkyl peroxy carbonates.

19. A film suitable for manufacturing a packaging article using a form-fill-seal machine comprising:

a substrate material having a first side and a second side; and

an extrusion coating composition blend according to any one of Claims 1 to 18, wherein

the extrusion coating composition blend is coated on one or both of the first and second sides of the substrate material.

20. The film of Claim 19, wherein the substrate material is BOPP, OPET or paper.

21. The film of Claim 19 or Claim 20, wherein the coating on each side of the substrate is less than 60 μm (e.g. from 5 to 25 μm, such as 20 μm).

22. The film of any one of Claims 19 to 21, wherein the substrate has a thickness of from 10 to 60 μm, such as from 15 to 30 μm, such as 20 μm.

23. The film of any one of Claims 19 to 22, wherein the film has a hot tack temperature window having a minimal value and a maximal value, wherein the difference between the minimal and maximal value is from 20ºC to 100ºC, optionally from 35ºC to 70ºC, such as from 40ºC to 50ºC (e.g. a range of from 42ºC to 46ºC).

24. The film of Claim 23, wherein the hot tack window of the film has a minimal value of from 110ºC to 120ºC and a maximal value of from 145ºC to 170ºC, optionally wherein the hot tack window has a minimal value of the film of from 113ºC to 115ºC and a maximal temperature of from 148ºC to 160ºC (e.g. a minimal value of from 113ºC to 114ºC and a maximal value of from 149ºC to 157ºC).

25. A process of manufacturing a packaging article comprising the steps of:

(a) providing a film comprising:

a substrate material having a first side and a second side; and

an extrusion coating composition blend according to any one of Claims 1 to 18, where the extrusion coating composition blend is coated on one or both of the first and second sides of the substrate material;

(b) subjecting the film to a form-fill-seal process to provide a packaging article.