CLAIMS

We claim:

1. A polymer blend composition, comprising:

(a) from 65 wt% to 90 wt% based on the total weight of the blend of an ethylene α-olefin elastomer having either no crystallinity or crystallinity derived from ethylene, having greater than75 wt% units derived from ethylene; and

(b) from 10 wt% to 35 wt% based on the total weight of the blend of a propylene polymer having 40 wt% or more units derived from propylene, having a heat of fusion equal to or below 75 J/g, and having isotactically arranged propylene derived sequences;

wherein the polymer blend composition has a melt index (measured at 2.16 kg at 190°C) of 0.01 to 10 g/10 min; and

wherein the ethylene α-olefin elastomer and the propylene polymer are prepared in separate reactors arranged in parallel configuration.

2. The polymer blend of claim 1, wherein the composition is a reactor blend of the ethylene α-olefin elastomer and the propylene polymer.

3. The polymer blend composition of claim 1 or 2, having a polydispersity index (Mw/Mn) of less than 5.0.

4. The polymer blend composition of any preceding claim, comprising from 55 wt% to 85 wt% units derived from ethylene.

5. The polymer blend composition of any preceding claim, wherein the propylene polymer is prepared using a metallocene catalyst.

6. The polymer blend composition of any preceding claim, wherein the polymer is substantially free of diene units.

7. An article comprising the polymer blend composition of claims 1 to 5, wherein the polymer blend composition is present in the article in the amount of 5 wt% to 70 wt%.

8. The article of claim 7, wherein the article is a multilayer film or monolayer film.

9. A process for forming a polymer blend composition of claim 1, comprising the steps of:

(a) polymerizing ethylene, propylene, and optionally C_4-C_{20} α-olefins to form an ethylene α-olefin elastomer in a first reactor; and

(b) polymerizing propylene, ethylene, and optionally C_4-C_{20} α-olefins to form a propylene polymer in a second reactor; and

(c) recovering the ethylene α-olefin elastomer and the propylene polymer and blending the ethylene α-olefin elastomer and the propylene polymer to form a polymer blend composition;

wherein the first reactor and second reactor are arranged in parallel configuration.

10. The process of claim 9, wherein the composition is a reactor blend of the ethylene α-olefin elastomer and the propylene polymer.

11. The process of claim 9 or 10, conducted in a solution process.

12. The process of any one of claims 9 to 11, wherein a catalyst used to form the ethylene α-olefin elastomer in the first reactor is different from a catalyst used to form the propylene polymer in the second reactor.