SUMMARY

[0006] The present disclosure provides an article. In an embodiment, the article includes (A) a top layer composed of a composition composed of (i) from 51 wt% to 90 wt% of a propylene-based polymer, and (ii) from 10 wt% to 49 wt% of an ethylene/octene multi-block copolymer having hard segments and soft segments. The ethylene/octene multi-block copolymer has a soft segment melt temperature (SS-Tm) less than 2°C. The article also includes (B) a bottom layer composed of a textile.

[0006a] In one aspect, there is provided an article comprising: A. a top layer composed of a composition comprising (i) from 51 wt% to 90 wt% of a propylene-based polymer, and (ii) from 10 wt% to 49 wt% of an ethylene/octene multi-block copolymer having hard segments and soft segments, the ethylene/octene multi-block copolymer comprising from 21 mol% to 35 mol% octene in the soft segment and having a soft segment melt temperature (SS-Tm) less than 2°C; and B. a bottom layer comprising a textile.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] FIG. 1 shows a scanning electron micrograph (SEM) of inventive example 7 (IE7) left and a SEM of comparative sample 18 (CS18) (right).

[0008] FIG. 2 shows a SEM of IE1 (left) and CE6 (right).

[0009] FIG. 3 shows a SEM of CS9.

DEFINITIONS

[0010] Any reference to the Periodic Table of Elements is that as published by CRC Press, Inc., 1990–1991. Reference to a group of elements in this table is by the new notation for numbering groups.

[0011] For purposes of United States patent practice, the contents of any referenced patent, patent application or publication are incorporated by reference in their entirety (or its equivalent U.S. version is so incorporated by reference) especially with respect to the disclosure of definitions (to the extent not inconsistent with any definitions specifically provided in this disclosure) and general knowledge in the art.

[0012] The numerical ranges disclosed herein include all values from, and including, the lower and upper value. For ranges containing explicit values (e.g., 1 or 2, or 3 to 5, or 6, or 7), any subrange between any two explicit values is included (e.g., the range 1-7 above includes subranges of from 1

to 2; from 2 to 6; from 5 to 7; from 3 to 7; from 5 to 6; etc.).

[0013] Unless stated to the contrary, implicit from the context, all parts and percents are based on weight and all test methods are current as of the filing date of this disclosure.

[0014] The terms "blend" or "polymer blend," as used herein, is a blend of two or more polymers. Such a blend may or may not be miscible (not phase separated at molecular level).

Claims

1. An article comprising:

A. a top layer composed of a composition comprising

(i) from 51 wt% to 90 wt% of a propylene-based polymer, and

(ii) from 10 wt% to 49 wt% of an ethylene/octene multi-block copolymer having hard segments and soft segments, the ethylene/octene multi-block copolymer comprising from 21 mol% to 35 mol% octene in the soft segment and having a soft segment melt temperature (SS-Tm) less than 2°C; and

B. a bottom layer comprising a textile.

2. The article of claim 1 wherein the composition of the top layer has

(i) a bally flex resistance value greater than 60,000; and

(ii) a Shore A hardness less than 80.

3. The article of claim 1 or 2 wherein the propylene-based polymer is a propylene/ethylene copolymer having

a density from 0.85 g/cc to 0.87 g/cc; and

a melt flow rate from 5 g/10 min to 30 g/10 min.

4. The article of any of claims 1-3 wherein the composition of the top layer comprises from 10 wt% to 49 wt% of

a first ethylene/octene multi-block copolymer having hard segments and soft segments, the first ethylene/octene multi-block copolymer having a soft segment melt temperature (SS-Tm) less than 2°C; and

a second ethylene/octene multi-block copolymer different than the first ethylene/octene multi-block copolymer, the second ethylene/octene multi-block copolymer having hard segments and soft segments, the second ethylene/octene multi-block copolymer having a soft segment melt temperature (SS-Tm) less than 2°C.

5. The article of any of claims 1-4 comprising

C. a middle foam layer composed of a composition comprising

(i) from 51 wt% to 90 wt% of a propylene-based polymer, and

(ii) from 10 wt% to 49 wt% of an ethylene/octene multi-block copolymer having hard segments and soft segments, the ethylene/octene multi-block copolymer having a soft segment melt temperature (SS-Tm) less than 2°C.

6. The article of claim 5 wherein the ethylene/octene multi-block copolymer in the middle foam layer comprises from 21 mol% to 35 mol% octene in the soft segment.

7. The article of claim 6 wherein the propylene-based polymer in the middle foam layer is a propylene/ethylene copolymer having

a density from 0.85 g/cc to 0.87 g/cc; and

a melt flow rate from 5 g/10 min to 30 g/10 min.

8. The article of any of claims 5-7 wherein the composition of the middle foam layer comprises

from 10 wt% to 49 wt% of

a first ethylene/octene multi-block copolymer having hard segments and soft segments, the first ethylene/octene multi-block copolymer having a soft segment melt temperature (SS-Tm) less than 2°C; and

a second ethylene/octene multi-block copolymer different than the first ethylene/octene multi-block copolymer, the second ethylene/octene multi-block copolymer having hard segments and soft segments, the second ethylene/octene multi-block copolymer having a soft segment melt temperature (SS-Tm) less than 2°C.

9. The article of claim 8 wherein the first ethylene/octene multi-block copolymer in the middle foam layer comprises from 21 mol% to 35 mol% octene in the soft segment; and

the second ethylene/octene multi-block copolymer in the middle foam layer comprises from 21 mol% to 35 mol% octene in the soft segment.