CLAIMS

1. An oriented, opaque, non-pearlescent article comprising one or more layers, wherein at least one layer is a composition comprising:

85-97 wt% polyester, based on the total weight of the composition;

incompatible polymer selected from cyclic olefin polymers and copolymers (COC), partially or fully hydrogenated styrenic polymers and copolymers, and combinations thereof, wherein the incompatible polymer is present in an amount of 5 wt% or less, based on the total weight of the composition; and

0-8 wt% light scattering pigment, based on the total weight of the composition;

wherein the article is oriented, the layer has an average light transmission percentage of about 20% or less for light having wavelengths in the range of 400 nm to 700 nm, and the layer has a non-pearlescent appearance of less than 15 units, measured as DE_{CMC} with a 45° incident light source between 15° near-specular reflection and 110° far specular reflection.

2. The article of claim 1, wherein the layer has a non-pearlescent gonioappearance of less than 10 units DE_{CMC} when measured between a 15° viewing angle and a 110° viewing angle from a 45° illuminant.

3. The article of claim 1 or claim 2, wherein the incompatible polymer has a Vicat Softening Point that is higher than the orientation temperature of the article.

4. The article of any one of claims 1-3, wherein the layer is white and has a CIELAB a* value within the range of ±10 units, and a CIELAB b* value within the range of ±10 units.

5. The article of any one of claims 1-4, wherein the polyester is polyethylene terephthalate (PET).

6. The article of any one of claims 1-5, wherein the incompatible polymer comprises a hydrogenated styrenic polymer.

7. The article of any one of claims 1-5, wherein the incompatible polymer comprises COC.

8. The article of any one of claims 1-7, wherein the composition contains no titanium dioxide.

9. The article of any one of claims 1-8, wherein the composition contains no more than 1 wt% of mineral filler, based on the total weight of the composition.

10. The article of any one of claims 1-8, wherein the light scattering pigment comprises zinc sulfide present in an amount of about 4 wt% or less, based on the total weight of the composition.

11. The article of any one of claims 1-7, 9, and 10, wherein the composition further comprises titanium dioxide.

12. The article of any one of claims 1-11, wherein the composition comprises no more than 0.1 wt% light scattering pigment, based on the total weight of the composition.

13. The article of any one of claims 1-12, wherein the composition further comprises an additive or colorant.

14. The article of any one of claims 1-13, wherein the composition comprises an additive selected from anti-block agents, anti-oxidants, anti-stats, slip agents, chain extenders, cross linking agents, flame retardants, IV reducers, laser marking additives, mold release, optical brighteners, flow aids, colorants, plasticizers, pigment, dyes, nucleating agents, oxygen scavengers, anti-microbials, UV stabilizers, and combinations thereof.

15. The article of any one of claims 1-14, wherein the composition comprises a colorant selected from dyes, organic pigments, inorganic pigments, and combinations thereof.

16. The article of any one of claims 13-15, wherein the colorant comprises aluminum.

17. The article of any one of claims 13-15, wherein the colorant comprises a combination of dyes.

18. The article of any one of claims 1-17, wherein the article is a container.

19. A method of manufacturing an opaque, non-pearlescent article, comprising the steps of:

(a) melt blending polyester with incompatible polymer selected from COC, partially or fully hydrogenated styrenic polymers and copolymers, and combinations thereof to produce a composition comprising 85-97 wt% polyester and about 5 wt% or less of incompatible polymer,

based on the total weight of the composition;

(b) subjecting the composition to orientation stress at a temperature below the Vicat Softening Point of the incompatible polymer; and

(c) producing an article that is visually non-pearlescent and has a light transmission percentage of less than 20% for light having wavelengths in the range of 400 nm to 700 nm.

20. The method of claim 19, wherein at least one additive or colorant is added to the composition during step (a).

21. An oriented, opaque, non-pearlescent, white article comprising one or more layers, wherein at least one layer is a composition comprising, based on the total weight of the composition:

91.5-97 wt% polyethylene terephthalate (PET);

less than 4 wt% incompatible polymer selected from COC and hydrogenated styrenic polymers;

less than 4 wt% mineral filler selected from titanium dioxide (TiO_2) and zinc sulfide (ZnS); and

less than 0.5 wt% additional component selected from colorants and additives;

wherein the article is oriented; the article has a light transmission percentage of less than 20% for light having wavelengths in the range of 400 nm to 700 nm; the layer has a non-pearlescent gonioappearance of less than 10 units DE_{CMC} when measured between a 15° viewing angle and a 110° viewing angle from a 45° illuminant; and the layer has a CIELAB a* value within the range of ±10 units, and a CIELAB b* value within the range of ±10 units.

22. The article of claim 21, wherein the composition comprises less than 1 wt% TiO_2 and less than 3 wt% ZnS.

23. An oriented, opaque, non-pearlescent article comprising one or more layers, wherein at least one layer is a composition comprising, based on the total weight of the composition:

91.5-97 wt% polyethylene terephthalate (PET);

less than 4 wt% incompatible polymer selected from COC and hydrogenated styrenic polymers;

less than 4 wt% zinc sulfide (ZnS); and

less than 0.5 wt% additional component selected from colorants and additives;

wherein the composition does not contain titanium dioxide; the article is oriented; the article has a light transmission percentage of less than 20% for light having wavelengths in the range of 400 nm to 700 nm; and the layer has a non-pearlescent gonioappearance of less than 10 units DE_{CMC} when measured between a 15° viewing angle and a 110° viewing angle from a 45° illuminant.

24. An oriented, opaque, non-pearlescent article comprising one or more layers, wherein at least one layer is a composition comprising, based on the total weight of the composition:

91.5-97 wt% polyethylene terephthalate (PET);

1 wt% to 5 wt% incompatible polymer selected from COC and hydrogenated styrenic polymers;

1 wt% to 3 wt% polymethylpentene (PMP); and

less than 0.5 wt% additional component selected from colorants and additives;

wherein the composition does not contain titanium dioxide or zinc sulfide; the article is oriented; the article has a light transmission percentage of less than 20% for light having wavelengths in the range of 400 nm to 700 nm; and the layer has a non-pearlescent gonioappearance of less than 10 units DE_{CMC} when measured between a 15° viewing angle and a 110° viewing angle from a 45° illuminant.

25. The article of claim 24, wherein the additional component comprises a non-mineral selected from aluminum and organic dyes.

26. An oriented article comprising a layer which is a composition comprising:

85-97 wt% polyester matrix resin, based on the total weight of the composition; and

COC in an amount of 5 wt% or less, based on the total weight of the composition;

wherein the article is oriented, the layer has an average light transmission of less than 20% for light having wavelengths in the range of 400 nm to 700 nm, and the layer has a non-pearlescent gonioappearance of less than 10 units DE_{CMC} when measured between a 15° viewing angle and a 110° viewing angle from a 45° illuminant.

27. The article of claim 26, wherein the layer is white.

28. The article of claim 26 or 27, wherein the polyester is polyethylene terephthalate (PET).

29. The article of any one of claims 25-28, wherein the composition contains no titanium dioxide.

30. The article of any one of claims 25-28, wherein the composition further comprises titanium dioxide.

31. The article of any one of claims 25-30, wherein the composition further comprises an additive or colorant.

32. The article of any one of claims 25-31, wherein the composition comprises an additive selected from anti-block agents, anti-oxidants, anti-stats, slip agents, chain extenders, cross linking agents, flame retardants, IV reducers, laser marking additives, mold release, optical brighteners, flow aids, plasticizers, nucleating agents, oxygen scavengers, anti-microbials and UV stabilizers.

33. The article of any one of claims 25-32, wherein the composition comprises a colorant selected from dyes, organic pigments, inorganic pigments, and combinations thereof.

34. The article of any one of claims 31-33, wherein the colorant comprises a combination of dyes.

35. The article of any one of claims 25-34, wherein the article is selected from a bottle, sheet, film, and fiber.

36. The article of any one of claims 25-35, wherein the COC has a glass transition temperature that is higher than the orientation temperature of the article.

37. A method of manufacturing an opaque, non-pearlescent article, comprising the steps of:

melt blending polyester with COC, to produce a composition comprising 85-97 wt% polyester and 5 wt% or less COC, based on the total weight of the composition;

subjecting the composition to orientation stress at a temperature below the glass transition temperature of the COC; and

producing an article that is visually non-pearlescent and has a light transmission percentage of less than 20% for light having wavelengths in the range of 400 nm to 700 nm.