CLAIMS

1. A flexible recyclable package comprising:

a first laminate film comprising one or more layers of polyethylene, one or more layers of EVOH, one or more tie layers, and one or more adhesive layers, wherein an outer layer of the first laminate film is a printable polyethylene layer;

a second laminate film comprising one or more layers of polyethylene, one or more layers of EVOH, one or more tie layers, and one or more adhesive layers;

wherein the first laminate film and second laminate film are sealed to each other to create a product chamber;

wherein the first laminate film and the second laminate film are sealed to each other in areas to form air pockets to provide a rigid three-dimensional air frame to the package in an empty state;

wherein the amount EVOH in the package by weight is less than or equal to 5% of the package;

wherein the package is substantially free of nylon; and

wherein the package meets recyclability criteria for curbside recycling.

2. The flexible recyclable package of claim 1, wherein the first laminate film comprises, in order:

a first sealable polyethylene layer with low initial seal band defining an exterior layer of the first laminate film;

an adhesive layer;

a second sealable polyethylene layer;

a third sealable polyethylene layer;

a first tie layer;

a first gas barrier layer of ethylene vinyl alcohol (EVOH);

a second tie layer;

a fourth sealable polyethylene layer; and

a fifth sealable polyethylene layer.

3. The flexible recyclable package of claim 2 wherein the first sealable polyethylene layer of the first laminate film has a thickness ranging from .010 to .075 mm.

4. The flexible recyclable package of claim 2, wherein the adhesive layer of the first laminate film has a thickness ranging from .002 to .010 mm.

5. The flexible recyclable package of claim 2, wherein the second sealable polyethylene layer of the first laminate film has a thickness ranging from .015 to .050 mm.

6. The flexible recyclable package of claim 2, wherein the third sealable polyethylene layer of the first laminate film has a thickness ranging from .015 to .050 mm.

7. The flexible recyclable package of claim 2, wherein the first tie layer of the first laminate film has a thickness ranging from .005 to .025 mm.

8. The flexible recyclable package of claim 2, wherein the first gas barrier layer of ethylene vinyl alcohol (EVOH) of the first laminate film has a thickness ranging from .002 to .005 mm.

9. The flexible recyclable package of claim 2, wherein the second tie layer of the first laminate film has a thickness ranging from .005 to .025 mm.

10. The flexible recyclable package of claim 2, wherein the fourth sealable polyethylene layer of the first laminate film has a thickness ranging from .015 to .050 mm.

11. The flexible recyclable package of claim 2, wherein the fifth sealable polyethylene layer of the first laminate film has a thickness ranging from .015 to .050 mm.

12. The flexible recyclable package of claim 1, wherein the second laminate film comprises, in order:

a first sealable polyethylene layer with low initial seal band defining an exterior layer of the second laminate film;

a second sealable polyethylene layer;

a first tie layer;

a first gas barrier layer of ethylene vinyl alcohol (EVOH);

a second tie layer;

a third sealable polyethylene layer; and

a fourth sealable polyethylene layer.

13. The flexible recyclable package of claim 12, wherein the first sealable polyethylene layer of the second laminate film has a thickness ranging from .010 to .050 mm.

14. The flexible recyclable package of claim 12, wherein the second sealable polyethylene layer of the second laminate film has a thickness ranging from .015 to .050 mm.

15. The flexible recyclable package of claim 12, wherein the first tie layer of the second laminate film has a thickness ranging from .005 to .025 mm.

16. The flexible recyclable package of claim 12, wherein the first gas barrier layer of ethylene vinyl alcohol (EVOH) of the second laminate film has a thickness ranging from .002 to .005 mm.

17. The flexible recyclable package of claim 12, wherein the second tie layer of the second laminate film has a thickness ranging from .005 to .025 mm.

18. The flexible recyclable package of claim 12, wherein the third sealable polyethylene layer of the second laminate film has a thickness ranging from .015 to .050 mm.

19. The flexible recyclable package of claim 12, wherein the fourth sealable polyethylene layer of the second laminate film has a thickness ranging from .015 to .050 mm.

20. The flexible recyclable package of claim 1, wherein the seal between the first and second laminate films has a seal strength of 40 N/25mm to 140 N/25mm.

21. The flexible recyclable package of claim 1, wherein the layers comprising each of the first and second laminate films have a lamination strength between such layers of 10 N/25mm to 20 N/25mm.

22. A flexible recyclable package comprising:

a first laminate film comprising one or more layers of polyethylene, one or more layers of EVOH, one or more tie layers, one or more nylon layers, and one or more adhesive layers, wherein an outer layer of the first laminate film is a printable polyethylene layer;

a second laminate film comprising one or more layers of polyethylene, one or more layers of EVOH, one or more tie layers, one or more nylon layers and one or more adhesive layers;

wherein the first laminate film and second laminate film are sealed to each other to create a product chamber;

wherein the first laminate film and the second laminate film are sealed to each other in areas to form air pockets to provide a rigid three-dimensional air frame to the package in an empty state;

wherein, in the first laminate film, at least one of the tie layers, polyethylene layers, EVOH layers or nylon layers further comprises one or more compatibilizers;

wherein, in the second laminate film, at least one of the tie layers, polyethylene layers, EVOH layers or nylon layers further comprise one or more compatibilizers; and

wherein the package meets recyclability criteria for curbside recycling.

23. The flexible recyclable package of claim 22, wherein the first laminate film comprises, in order:

a first sealable polyethylene layer with low initial seal band defining an exterior layer of the first laminate film;

an adhesive layer;

a second sealable polyethylene layer;

a first tie layer and a compatibilizer;

a first nylon layer;

a first gas barrier layer of ethylene vinyl alcohol (EVOH);

a second nylon layer;

a second tie layer and a compatibilizer;

a second tie layer; and

a third sealable polyethylene layer.

24. The flexible recyclable package of claim 23, wherein the first sealable polyethylene layer of the first laminate film has a thickness ranging from .010 to .075 mm.

25. The flexible recyclable package of claim 23, wherein the adhesive layer of the first laminate film has a thickness ranging from .002 to .010 mm.

26. The flexible recyclable package of claim 23, wherein the second sealable polyethylene layer of the first laminate film has a thickness ranging from .015 to .050 mm.

27. The flexible recyclable package of claim 23, wherein the first tie layer of the first laminate film further comprises one or more compatibilizers and has a thickness ranging from .015 to .030 mm.

28. The flexible recyclable package of claim 23, wherein the first nylon layer of the first laminate film has a thickness ranging from .002 to .010 mm.

29. The flexible recyclable package of claim 23, wherein the first gas barrier layer of ethylene vinyl alcohol (EVOH) of the first laminate film has a thickness ranging from .002 to .005 mm.

30. The flexible recyclable package of claim 23, wherein the second nylon layer of the first laminate film has a thickness ranging from .002 to .010 mm.

31. The flexible recyclable package of claim 23, wherein second tie layer of the first laminate film further comprises one or more compatibilizers and has a thickness ranging from .015 to .030 mm.

32. The flexible recyclable package of claim 23, wherein the third sealable polyethylene layer of the first laminate film has a thickness ranging from .015 to .050 mm.

33. The flexible recyclable package of claim 22, wherein the second laminate film comprises, in order:

a first sealable polyethylene layer with low initial seal band defining an exterior layer of the second laminate film;

a first tie layer and a compatibilizer;

a first nylon layer;

a first gas barrier layer of ethylene vinyl alcohol (EVOH);

a second nylon layer;

a second tie layer and a compatibilizer; and

a second sealable polyethylene layer.

34. The flexible recyclable package of claim 33, wherein the first sealable polyethylene layer of the second laminate film has a thickness ranging from .010 to .050 mm.

35. The flexible recyclable package of claim 33, wherein first tie layer of the second laminate film further comprises one or more compatibilizers and has a thickness ranging from .015 to .030 mm.

36. The flexible recyclable package of claim 33, wherein the first nylon layer of the second laminate film has a thickness ranging from .002 to .010 mm.

37. The flexible recyclable package of claim 33, wherein the first gas barrier layer of ethylene vinyl alcohol (EVOH) of the second laminate film has a thickness ranging from .002 to .005 mm.

38. The flexible recyclable package of claim 33, wherein the second nylon layer of the second laminate film has a thickness ranging from .002 to .010 mm.

39. The flexible recyclable package of claim 33, wherein the second tie layer of the second laminate film further comprises one or more compatibilizers and has a thickness ranging from .015 to .030 mm.

40. The flexible recyclable package of claim 33, wherein the sealable polyethylene layer of the second laminate film has a thickness ranging from .015 to .050 mm.

41. The flexible recyclable package of claim 22, wherein the seal between the first and second laminate films has a seal strength of 40 N/25mm to 140 N/25mm.

42. The flexible recyclable package of claim 22, wherein the layers of the first laminate film have a lamination strength between each layer of 10 N/25mm to 20 N/25mm.

43. The flexible recyclable package of claim 22, wherein the layers of the second laminate film have a lamination strength between each layer of 10 N/25mm to 20 N/25mm.

44. The flexible recyclable package of claim 22, wherein the material has a gas transmission rate of 0.7 cc/m2 to 2.5 cc/m2.

45. The flexible recyclable package of claim 22, wherein the one or more compatibilizers comprises at least two compatibilizers.

46. The flexible recyclable package of claim 45, wherein the one or more compatibilizers comprises first and second compatibilizers.

47. The flexible recyclable package of claim 46, wherein the first compatibilizer is from 1-5% by weight.

48. The flexible recyclable package of claim 47, wherein the second compatibilizer is from 8-20% by weight.

49. The flexible recyclable package of claim 46, wherein the first compatibilizer is 1% by weight and the second compatibilizer is 14-20% by weight.

50. The flexible recyclable package of claim 46, wherein the first compatibilizer is 2% by weight and the second compatibilizer is 12-15% by weight.

51. The flexible recyclable package of claim 46, wherein the first compatibilizer is 3% by weight and the second compatibilizer is 11-15% by weight.

52. The flexible recyclable package of claim 46, wherein the first compatibilizer is 4% by weight and the second compatibilizer is 8-15% by weight.

53. The flexible recyclable package of claim 46, wherein the first compatibilizer is 5% by weight and the second compatibilizer is 8-15% by weight.

54. The flexible recyclable package of claim 22, wherein one or more compatibilizer is in a tie layer.

55. The flexible recyclable package of claim 22, wherein one or more compatibilizer is in an EVOH layer.

56. The flexible recyclable package of claim 22, wherein one or more compatibilizer is in a polyethylene layer.

57. A flexible recyclable package comprising:

a first laminate film comprising one or more layers of polyethylene, one or more layers of EVOH, one or more tie layers, one or more nylon layers, and one or more adhesive layers, wherein an outer layer of the first laminate film is a printable nylon layer;

a second laminate film comprising one or more layers of polyethylene, one or more layers of EVOH, one or more tie layers, one or more nylon layers and one or more adhesive layers;

wherein the first laminate film and second laminate film are sealed to each other to create a product chamber;

wherein the first laminate film and the second laminate film are sealed to each other in areas to form air pockets to provide a rigid three-dimensional air frame to the package in an empty state;

wherein, in the first laminate film, at least one of the tie layers, polyethylene layers, EVOH layers or nylon layers further comprises one or more compatibilizers;

wherein, in the second laminate, at least one of the tie layers, polyethylene layers, EVOH layers or nylon layers further comprises one or more compatibilizers; and

wherein the package meets recyclability criteria for curbside recycling.

58. The flexible recyclable package of claim 57, wherein the first laminate film comprises, in order:

a sealable nylon layer with low initial seal band defining an exterior layer of the first laminate;

an adhesive layer;

a first sealable polyethylene;

a first tie layer and a compatibilizer;

a first gas barrier layer of ethylene vinyl alcohol (EVOH);

a second tie layer and a compatibilizer; and

a second sealable polyethylene layer.

59. The flexible recyclable package of claim 58, wherein the first sealable polyethylene layer of the first laminate film has a thickness ranging from .010 to .075 mm.

60. The flexible recyclable package of claim 58, wherein the adhesive layer of the first laminate film has a thickness ranging from .002 to .010 mm.

61. The flexible recyclable package of claim 58, wherein the second sealable polyethylene layer of the first laminate film has a thickness ranging from .015 to .050 mm.

62. The flexible recyclable package of claim 58, wherein the first tie layer of the first laminate film further comprises one or more compatibilizers and has a thickness ranging from .015 to .030 mm.

63. The flexible recyclable package of claim 58, wherein the first nylon layer of the first laminate film has a thickness ranging from .002 to .010 mm.

64. The flexible recyclable package of claim 58, wherein the first gas barrier layer of ethylene vinyl alcohol (EVOH) of the first laminate film has a thickness ranging from .002 to .005 mm.

65. The flexible recyclable package of claim 58, wherein the second nylon layer of the first laminate film has a thickness ranging from .002 to .010 mm.

66. The flexible recyclable package of claim 58, wherein second tie layer of the first laminate film further comprises one or more compatibilizers and has a thickness ranging from .015 to .030 mm.

67. The flexible recyclable package of claim 58, wherein the third sealable polyethylene layer of the first laminate film has a thickness ranging from .015 to .050 mm.

68. The flexible recyclable package of claim 57, wherein the second laminate film comprises, in order:

a first sealable polyethylene layer with low initial seal band defining an exterior layer of the second laminate;

a first tie layer and a compatibilizer;

a first gas barrier layer of ethylene vinyl alcohol (EVOH);

a second tie layer and a compatibilizer; and

a second sealable polyethylene layer.

69. The flexible recyclable package of claim 68, wherein the first sealable polyethylene layer of the second laminate film has a thickness ranging from .010 to .050 mm.

70. The flexible recyclable package of claim 68, wherein first tie layer of the second laminate film further comprises one or more compatibilizers and has a thickness ranging from .015 to .030 mm.

71. The flexible recyclable package of claim 68, wherein the first nylon layer of the second laminate film has a thickness ranging from .002 to .010 mm.

72. The flexible recyclable package of claim 68, wherein the first gas barrier layer of ethylene vinyl alcohol (EVOH) of the second laminate film has a thickness ranging from .002 to .005 mm.

73. The flexible recyclable package of claim 68, wherein the second nylon layer of the second laminate film has a thickness ranging from .002 to .010 mm.

74. The flexible recyclable package of claim 68, wherein the second tie layer of the second laminate film further comprises one or more compatibilizers and has a thickness ranging from .015 to .030 mm.

75. The flexible recyclable package of claim 68, wherein the sealable polyethylene layer of the second laminate film has a thickness ranging from .015 to .050 mm.

76. The flexible recyclable package of claim 57, wherein the seal between the first and second laminate films has a seal strength of 40 N/25mm to 140 N/25mm.

77. The flexible recyclable package of claim 57, wherein the layers of the first laminate have a lamination strength between each layer of 10 N/25mm to 20 N/25mm.

78. The flexible recyclable package of claim 57, wherein the layers of the second laminate have a lamination strength between each layer of 10 N/25mm to 20 N/25mm.

79. The flexible recyclable package of claim 57, wherein the material has a gas transmission rate of 0.7 cc/m2 to 2.5 cc/m2.

80. The flexible recyclable package of claim 57, wherein the one or more compatibilizers comprises at least two compatibilizers.

81. The flexible recyclable package of claim 57, wherein the one or more compatibilizers comprises first and second compatibilizers.

82. The flexible recyclable package of claim 81, wherein the first compatibilizer is from 1-5% by weight.

83. The flexible recyclable package of claim 82, wherein the second compatibilizer is from 8-20% by weight.

84. The flexible recyclable package of claim 81, wherein the first compatibilizer is 1% by weight and the second compatibilizer is 14-20% by weight.

85. The flexible recyclable package of claim 81, wherein the first compatibilizer is 2% by weight and the second compatibilizer is 12-15% by weight.

86. The flexible recyclable package of claim 81, wherein the first compatibilizer is 3% by weight and the second compatibilizer is 11-15% by weight.

87. The flexible recyclable package of claim 81, wherein the first compatibilizer is 4% by weight and the second compatibilizer is 8-15% by weight.

88. The flexible recyclable package of claim 81, wherein the first compatibilizer is 5% by weight and the second compatibilizer is 8-15% by weight.

89. The flexible recyclable package of claim 57, wherein one or more compatibilizers are in a tie layer.

90. The flexible recyclable package of claim 57, wherein one or more compatibilizers are in an EVOH layer.

91. The flexible recyclable package of claim 57, wherein one or more compatibilizers are in a polyethylene layer.