CLAIMS

1. A liner-based system comprising:

a collapsible liner disposed within an overpack configured to dispense a fluid contained within the collapsible liner by collapsing the collapsible liner, wherein the liner and overpack are made by blow molding the liner and the overpack at the same time using nested preforms, the collapsible liner and the overpack being comprised of different materials having different melting points,

wherein the liner has a thickness such that the liner is substantially self-supporting in an expanded state, and

wherein the collapsible liner defines surface features configured to be predisposed against collapsing of the collapsible liner when not in active dispense, the surface features of the collapsible liner defining a plurality of vertically disposed grooves and a plurality of horizontally disposed grooves along a circumference of the collapsible liner,

wherein the plurality of vertically disposed grooves of the collapsible liner and the plurality of horizontally disposed grooves of the collapsible liner outline a plurality of rectangular-shaped panels spaced around the circumference of the collapsible liner.

2. The liner-based system of claim 1, wherein the collapsible liner is configured to collapse away from an interior wall of the overpack upon the introduction of a gas or liquid into an annular space between the collapsible liner and the overpack, thereby dispensing contents of the collapsible liner.

3. The liner-based system of claim 2, wherein the plurality of vertically disposed grooves of the collapsible liner and the plurality of horizontally disposed grooves of the collapsible liner are configured to control the collapse of the liner.

4. The liner-based system of claim 1, further comprising a chime coupled to the exterior of the overpack.

5. The liner-based system of claim 4, wherein the chime is coupled to the overpack by snap fit, the chime substantially entirely covering the one or more surface features.

6. The liner-based system of claim 2, wherein at least one of the collapsible liner or overpack are configured to control the collapse of the collapsible liner such that the collapsible liner collapses substantially evenly circumferentially away from the interior wall of the overpack.

7. The liner-based system of claim 2, wherein at least one of the collapsible liner and overpack comprises a barrier coating for protecting contents of the collapsible liner.

8. The liner-based system of claim 2, wherein at least one of the collapsible liner and overpack include a coating or wrap that at least partially protects the contents of the collapsible liner from ultra-violet rays.

9. The liner-based system of claim 2, wherein at least one of the materials comprising the collapsible liner and overpack include additional additives, the additives comprising at least one of an ultra-violet blocking additive, an energy-absorbing additive, an energy releasing additive, or a colorant.

10. The liner-based system of claim 2, wherein at least one of the collapsible liner and overpack preforms include features to form air channels during the blow mold process that permit gas introduced during pressure dispense or pressure assisted pump dispense to flow more evenly throughout the annular space between the overpack and collapsible liner.

11. The liner-based system of claim 2, wherein at least one of the collapsible liner and overpack comprises a plurality of wall layers.

12. The liner-based system of claim 2, wherein at least one of the collapsible liner and overpack are comprised of a biodegradable material.

13. The liner-based system of claim 2, wherein the collapsible liner and overpack walls in an expanded shape are substantially cylindrical.

14. The liner-based system of claim 5, further comprising a handle coupled to at least one of the overpack and the collapsible liner.

15. An integrated liner-based system comprising:

an overpack; and

a collapsible liner provided within the overpack, the collapsible liner comprising a mouth and a liner wall forming an interior cavity of the collapsible liner and having a thickness such that the liner is substantially self-supporting in an expanded state, but is collapsible at a pressure of less than about 20 psi;

wherein the liner and overpack are made by blow molding the liner and the overpack at the same time using nested preforms; and

wherein the collapsible liner defines surface features configured to be predisposed against collapsing of the collapsible liner when not in active dispense, the surface features of the collapsible liner defining a plurality of vertically disposed grooves and a plurality of horizontally disposed grooves along a circumference of the collapsible liner,

wherein the plurality of vertically disposed grooves of the collapsible liner and the plurality of horizontally disposed grooves of the collapsible liner outline a plurality of rectangular-shaped panels spaced around the circumference of the collapsible liner.

16. The integrated liner-based system of claim 15, wherein the overpack defines a plurality of vertically disposed grooves and a plurality of horizontally disposed grooves along a circumference of the overpack, the plurality of vertically disposed grooves of the overpack being co-extensive with the plurality of vertically disposed grooves of the collapsible liner, and the plurality of horizontally disposed grooves of the overpack being co-extensive with the plurality of horizontally disposed grooves of the collapsible liner.

17. The liner-based system of claim 1, wherein the overpack defines a plurality of vertically disposed grooves and a plurality of horizontally disposed grooves along a

circumference of the overpack, the plurality of vertically disposed grooves of the overpack being co-extensive with the plurality of vertically disposed grooves of the collapsible liner, and the plurality of horizontally disposed grooves of the overpack being co-extensive with the plurality of horizontally disposed grooves of the collapsible liner.

Claims

We claim:

1. A liner-based system comprising:

a liner disposed within an overpack, wherein the liner and overpack are made by blow molding the liner and the overpack at the same time using nested preforms, the liner and the overpack being comprised of different materials having different melting points.

2. The liner-bases system of claim 1, wherein the liner has a thickness such that the liner is substantially self-supporting in an expanded state.

3. The liner-based system of claim 1, wherein the liner is configured to collapse away from an interior wall of the overpack upon the introduction of a gas or liquid into an annular space between the liner and the overpack, thereby dispensing contents of the liner.

4. The liner-based system of claim 3, wherein at least one of the liner or overpack comprises one or more surface features for controlling the collapse of the liner.

5. The liner-based system of claim 4, wherein the one or more surface features comprise a plurality of rectangular-shaped panels spaced around the circumference of the at least one of the liner or overpack.

6. The liner-based system of claim 5, wherein the one or more surface features for controlling the collapse of the liner are configured to maintain the integrity between the liner and overpack when not in active dispense.

7. The liner-based system of claim 4, further comprising a chime coupled to the exterior of the overpack.

8. The liner-based system of claim 7, wherein the chime is coupled to the overpack by snap fit, the chime substantially entirely covering the one or more surface features.

9. The liner-based system of claim 3, wherein at least one of the liner or overpack are configured to control the collapse of the liner such that the liner collapses substantially evenly circumferentially away from the interior wall of the overpack.

10. The liner-based system of claim 3, wherein at least one of the liner or overpack comprises a barrier coating for protecting contents of the liner.

11. The liner-based system of claim 3, wherein at least on of the liner or overpack include a coating or wrap that at least partially protects the contents of the liner from ultra-violet rays.

12. The liner-based system of claim 3, wherein at least one of the materials comprising the liner or overpack include additional additives, the additives comprising at least one of an ultra-violet blocking additive, an energy-absorbing additive, an energy releasing additive, or a colarant.

13. The liner-based system of claim 3, wherein at least one of the liner or overpack preforms include features to form air channels during the blow mold porcess that permit gas introduced during pressure dispense or pressure assisted pump dispense to flow more evenly throughout the annular space between the overpack and liner.

14. The liner-based system of claim 3, wherein at least one of the liner or overpack comprises a plurality of wall layers.

15. The liner-based system of claim 3, wherein at least one of the liner or overpack are comprised of a biodegradable material.

16. The liner-based system of claim 3, wherein the liner and overpack walls in an expanded shape are substantially cylindrical.

17. The liner-based system of claim 8, further comprising a handle coupled to at least one of the overpack or liner.

18. A method for providing a liner-based system, the method comprising:

providing a liner preform;

providing an overpack preform, the material comprising the overpack preform being different than the material comprising the liner preform;

heating the liner preform to a first temperature;

inserting the heated liner preform into the overpack preform;

heating the nested liner and overpack preforms;

blow-molding the heated nested preforms at the same time.

19. The method of claim 18, further comprising providing features in at least one of the liner or overpack preforms to form air channels during the blow mold process that permit gas introduced during pressure dispense or pressure assisted pump dispense to flow more evenly throughout the annular space between the overpack and liner.

20. The method of claim 18, further comprising providing additives in at least one of the materials used to make the liner preform or the overpack preform, the additives comprising at least one of an ultra-violet blocking additive, an energy-absorbing additive, an energy releasing additive, or a colarant.

21. An integrated liner-based system comprising:

an overpack; and

a liner provided within the overpack, the liner comprising a mouth and a liner wall forming an interior cavity of the liner and having a thickness such that the liner is substantially self-supporting in an expanded state, but is collapsible at a pressure of less than about 20 psi;

wherein the liner and overpack are made by blow molding the liner and the overpack at the same time using nested preforms.