CLAIMS

1. An insulative cup comprising

a body including a sleeve-shaped side wall and

a floor coupled to the body to define an interior region bounded by the sleeve-shaped side wall and the floor, wherein the body comprises a sheet comprising insulative cellular non-aromatic polymeric material configured to provide means for enabling localized plastic deformation in at least one selected region of the body to provide a plastically deformed first material segment having a first density located in a first portion of the selected region of the body and a second material segment having a second density lower than the first density located in an adjacent second portion of the selected region of the body without fracturing the insulative cellular non-aromatic polymeric material so that a predetermined insulative characteristic is maintained in the body~~,~~

wherein the insulative cellular non-aromatic polymeric material comprises a polypropylene base resin having a high melt strength, a polypropylene homopolymer resin, at least one nucleation agent, and gas means for expanding the resins to reduce density.

2. The insulative cup of claim 1, wherein

(a) the gas means comprises carbon dioxide, or

(b) the polypropylene base resin comprises broadly distributed molecular weight polypropylene characterized by a distribution that is unimodal.

~~2~~3. The insulative cup of claim 1, wherein a first of the selected regions of the body in which localized plastic deformation is enabled by the insulative cellular non-aromatic polymeric material is in the sleeve-shaped side wall and wherein the sleeve-shaped side wall includes an upright inner tab arranged to extend upwardly from the floor and configured to provide the first material segment having the first density in the first of the selected regions of the body, an upright outer tab arranged to extend upwardly from the floor and to mate with the upright inner tab along an interface therebetween, and an upright fence arranged to interconnect the upright inner and outer tabs and surround the interior region and configured to provide the second material segment having the second density in the first of the selected regions of the body and cooperate with the upright inner and outer tabs to form the sleeve-shaped side wall.

~~3~~4. The insulative cup of claim ~~2~~3, wherein a second of the selected regions of the body in which localized plastic deformation is enabled by the insulative cellular non-aromatic polymeric material is in a rolled brim included in the body and coupled to an upper end of the sleeve-shaped side wall to lie in spaced-apart relation to the floor and to frame an opening into the interior region and wherein the rolled brim includes an inner rolled tab configured to provide the first material segment in the second of the selected regions of the body and coupled to an upper end of the upright outer tab included in the sleeve-shaped side wall, an outer rolled tab coupled to an upper end of

the upright inner tab included in the sleeve-shaped side wall and to an outwardly facing exterior surface of the inner rolled tab, and a rolled lip arranged to interconnect oppositely facing side edges of each of the inner and outer rolled tabs and configured to provide the second material segment having the second density in the second of the selected region of the body and cooperate with the inner and outer rolled tabs to form the rolled brim~~.~~, and optionally;

~~4. The insulative cup of claim 3,~~ wherein a third of the selected regions of the body in which localized plastic deformation is enabled by the insulative cellular non-aromatic polymeric material is in a floor mount included in the body and coupled to a lower end of the sleeve-shaped side wall to lie in spaced-apart relation to the rolled brim and to the floor to support the floor in a stationary position relative to the sleeve-shaped side wall to form the interior region and wherein the floor mount includes a web-support ring coupled to the lower end of the sleeve-shaped side wall and configured to provide the second material segment having the second density in the third of the selected regions of the body, a floor-retaining flange coupled to the floor and arranged to be surrounded by the web-support ring, and a web arranged to interconnect the floor-retaining flange and the web-support ring and configured to provide the first material segment having the first density in the third of the selected regions of the body~~.~~, and optionally;

~~5. The insulative cup of claim 4,~~ wherein a fourth of the selected regions of the body in which localized plastic deformation is enabled by the insulative cellular non-aromatic polymeric material is in the floor-retaining flange of the floor mount, the floor-retaining flange includes an alternating series of upright thick and thin staves arranged in side-to-side relation to extend upwardly from the web toward the interior region bounded by the sleeve-shaped side wall and the floor, a first of the upright thick staves is configured to include a right side edge extending upwardly from the web toward the interior region, a second of the upright thick staves is configured to include a left side edge arranged to extend upwardly from the web toward the interior region and lie in spaced-apart confronting relation to the right side edge of the first of the upright thick staves, and a first of the upright thin staves is arranged to interconnect the left side edge of the first of the upright thick staves and the right side edge of the second of the upright thick staves and to cooperate with the left and right side edges to define therebetween a vertical channel, the first of the upright thin staves is configured to provide the first material segment in the fourth of the selected regions of the body, and

the first of the upright thick staves is configured to provide the second material segment in the fourth of the selected regions of the body~~.~~, and optionally;

~~6. The insulative cup of claim 5,~~ (a) wherein the first of the upright thin staves is located relative to the first and second of the upright thick staves to cause the vertical channel to open inwardly into a lower interior region bounded by the floor-retaining flange and a horizontal platform included in the floor and located above the floor-retaining flange~~.~~, or;

~~7. The insulative cup of claim 5,~~ (b) wherein the first of the upright thin staves is located relative to the first and second of the upright thick staves to cause the vertical channel to open outwardly in a direction toward the web-support ring.

~~8~~5. The insulative cup of claim ~~2~~3, wherein (i) the upright inner tab includes an inner surface bounding a portion of the interior region and an outer surface facing toward the upright outer tab, the upright outer tab includes an inner surface facing toward the interior region and mating with the outer surface of the upright inner tab to define the interface between the upright inner and outer tabs, and the upright outer tab further includes an outer face facing away from the upright inner tab~~.~~, and optionally;

~~9. The insulative cup of claim 8,~~ wherein each of the inner and outer surfaces of the upright inner and outer tabs has an arcuate shape in a horizontal cross-section and subtends an acute angle of less than 20°~~.~~, or;

~~10. The insulative cup of claim 2,~~ (ii) wherein the upright fence is C-shaped in a horizontal cross-section and each of the upright inner and outer tabs has an arcuate shape in a horizontal cross-section~~.~~, or;

~~11. The insulative cup of claim 2, wherein~~ (iii) the upright fence includes an upright left side edge and an upright right side edge arranged to lie in spaced-apart confronting relation to the upright left side edge and the upright outer tab is configured to have the first density and mate with the upright inner tab to establish a bridge arranged to interconnect the upright left and right side edges of the upright fence and formed of plastically deformed material having the first density~~.~~, and optionally;

~~12. The insulative cup of claim 11,~~ wherein the upright fence has an inner surface bounding a portion of the interior region and an outer surface facing away from the interior region and surrounding the inner surface of the upright fence and cooperating with the inner surface of the upright fence to define a first thickness therebetween, the upright inner tab includes an inner surface bounding a portion of the

interior region and an outer surface facing toward the upright outer tab, the upright outer tab includes an inner surface facing toward the interior region and mating with the outer surface of the upright inner tab to define the interface between the upright inner and outer tabs, and the upright outer tab further includes an outer face facing away from the upright inner tab, the inner and outer surfaces of the upright inner tab cooperate to define a second thickness therebetween that is about half of the first thickness, and the inner and outer surfaces of the upright outer tab cooperate to define a third thickness that is about half of the first thickness.

~~13~~6. The insulative cup of claim 1, wherein the body further includes a rolled brim comprising the insulative cellular non-aromatic polymeric material, the rolled brim is coupled to an upper end of the sleeve-shaped side wall to lie in spaced-apart relation to the floor and to frame an opening into the interior region, and the rolled brim includes an inner rolled tab configured to provide the plastically deformed first material segment having the first density and to include oppositely facing left and right side edges and a rolled lip arranged to interconnect the oppositely facing left and right side edges of the inner rolled tab and configured to provide the second material segment having the second density.

~~14~~7. The insulative cup of claim ~~13~~6, wherein the rolled brim further includes an outer rolled tab coupled to an outwardly facing surface of the inner rolled tab to provide an outer shell covering the inner rolled tab and formed of plastically deformed material having the first density~~.~~, and optionally;

~~15. The insulative cup of claim 14,~~ wherein the outer rolled tab includes oppositely facing left and right side edges and the rolled lip is arranged to interconnect the oppositely facing left and right side edges of the outer rolled tab~~.~~, and optionally;

~~16. The insulative cup of claim 15,~~ wherein the rolled lip is C-shaped in horizontal cross-section and each of the inner and outer rolled tabs has an arcuate shape between the oppositely facing left and right side edges thereof to provide the rolled brim with an annular shape.

~~17~~8. The insulative cup of claim ~~13~~6, wherein; (i) the body further includes a sleeve-shaped side wall comprising the insulative cellular non-aromatic polymeric material and the sleeve-shaped side wall includes an upright inner tab arranged to extend upwardly from the floor and configured to provide the plastically deformed first material segment having the first density, an upright outer tab arranged to extend upwardly from

the floor and to mate with the upright inner tab along an interface therebetween, and an upright fence arranged to interconnect the upright inner and outer tabs and surround the interior region and configured to provide the second material segment having the second density~~.~~, or;

~~18. The insulative cup of claim 13,~~ (ii) wherein the body further includes a floor mount comprising the insulative cellular non-aromatic polymeric material and the floor mount includes a web-support ring coupled to a lower end of the sleeve-shaped side wall and configured to provide the second material segment having the second density, a floor-retaining flange coupled to the floor and arranged to be surrounded by the web-support ring, and a web arranged to interconnect the floor-retaining flange and the web-support ring and configured to provide the plastically deformed first material segment having the first density~~.~~, or;

~~19. The insulative cup of claim 13, wherein~~ (iii) the body further includes a floor-retaining flange comprising the insulative cellular non-aromatic polymeric material and wherein the floor-retaining flange is coupled to the floor and is formed to include an alternating series of upright thick and thin staves arranged in side-to-side relation to extend upwardly toward the interior region bounded by the sleeve-shaped side wall and the floor, a first of the upright thick staves is configured to include a right side edge extending upwardly toward the interior region, a second of the upright thick staves is configured to include a left side edge extending upwardly toward the interior region and lie in spaced-apart confronting relation to the right-side edge of the first of the upright thick staves, and a first of the upright thin staves is arranged to interconnect the left and right side edges to define therebetween a vertical channel, the first of the upright thin staves is configured to provide the plastically deformed first material segment, and the first of the upright thick staves is configured to provide the second material segment.

~~20~~9. The insulative cup of claim 1, wherein the body further includes an annular rolled brim comprising the insulative cellular non-aromatic polymeric material, the annular rolled brim is coupled to an annular upper end of the sleeve-shaped side wall to lie in spaced-apart relation to the floor and to frame an opening into the interior region, the annular rolled brim includes a rolled tab configured to provide the plastically deformed first material segment having the first density and to include oppositely facing left and right side edges, and the annular rolled brim further includes a rolled lip coupled to the annular upper end of the sleeve-shaped side wall and arranged to

interconnect the oppositely facing left and right side edges of the rolled tab and configured to provide the second material segment having the second density.

~~21~~10. The insulative cup of claim 1, wherein the body further includes a floor mount comprising the insulative cellular non-aromatic polymeric material, the floor mount is coupled to a lower end of the sleeve-shaped side wall and to the floor to support the floor in a stationary position relative to the sleeve-shaped side wall to form the interior region, and the floor mount includes a floor-retaining flange coupled to the floor, a web-support ring coupled to the lower end of the sleeve-shaped side wall and arranged to surround the floor-retaining flange, and a web arranged to interconnect the floor-retaining flange and the web-support ring and configured to provide the plastically deformed first material segment having the first density, and the web-support ring is configured to provide the second material segment having the second density.

~~22~~11. The insulative cup of claim ~~21~~10, wherein (i) each of the web and the web-support ring has an annular shape~~.~~, and optionally;

~~23. The insulative cup of claim 22,~~ wherein the floor-retaining flange has an annular shape~~.~~, or;

~~24. The insulative cup of claim 21, wherein~~(ii) each of the floor-retaining flange, the web, and the web-support ring includes an inner layer having an interior surface mating with the floor and an overlapping outer layer mating with an exterior surface of the inner layer~~.~~, or;

~~25. The insulative cup of claim 21, wherein~~ (iii) the floor includes a horizontal platform bounding a portion of the interior region and a platform-support member coupled to the horizontal platform and arranged to extend downwardly away from the interior region into a space provided between the floor-retaining flange and the web-support ring to mate with each of the floor-retaining flange and the web-support ring~~.~~, and optionally;

~~26. The insulative cup of claim 25,~~ (a) wherein the platform-support member has an annular shape and is arranged to surround the floor-retaining flange and lie in an annular space provided between the horizontal platform and the web~~.~~, or;

~~27. The insulative cup of claim 25,~~ (b) wherein each of the floor-retaining flange, the web, and the web-support ring includes an inner layer having an interior surface mating with the floor and an overlapping outer layer mating with an exterior

surface of the inner layer and the inner layer of each of the floor-retaining flange, the web, and the web-support ring is arranged to mate with the platform-support member~~.~~,

~~28. The insulative cup of claim 21, wherein~~(iv) the body further includes a sleeve-shaped side wall comprising the insulative cellular non-aromatic polymeric material and the sleeve-shaped side wall includes an upright inner tab arranged to extend upwardly from the floor and configured to provide the plastically deformed first material segment having the first density, an upright outer tab arranged to extend upwardly from the floor and to mate with the upright inner tab along an interface therebetween, and an upright fence arranged to interconnect the upright inner and outer tabs and surround the interior region and configured to provide the second material segment having the second density~~.~~, or;

~~29. The insulative cup of claim 21, wherein~~ (v) the body further includes a floor-retaining flange comprising the insulative cellular non-aromatic polymeric material and wherein the floor-retaining flange is coupled to the floor and is formed to include an alternating series of upright thick and thin staves arranged in side-to-side relation to extend upwardly toward the interior region bounded by the sleeve-shaped side wall and the floor, a first of the upright thick staves is configured to include a right side edge extending upwardly toward the interior region, a second of the upright thick staves is configured to include a left side edge extending upwardly toward the interior region and lie in spaced-apart confronting relation to the right-side edge of the first of the upright thick staves, and a first of the upright thin staves is arranged to interconnect the left and right side edges to define therebetween a vertical channel, the first of the upright thin staves is configured to provide the plastically deformed first material segment, and the first of the upright thick staves is configured to provide the second material segment.

~~30~~12. The insulative cup of claim 1, wherein the body further includes a floor-retaining flange arranged to lie in a stationary position relative to the sleeve-shaped side wall and coupled to the floor to retain the floor in a stationary position relative to the sleeve-shaped side wall, the floor includes a horizontal platform having a perimeter edge mating with an inner surface of the sleeve-shaped side wall and an upwardly facing top side bounding a portion of the interior region, and the floor-retaining flange includes an alternating series of upright thick and thin staves arranged to lie in side-to-side relation to one another to extend upwardly toward a downwardly facing underside of the horizontal platform, a first of the upright thick staves is configured to include a right side edge

extending upwardly toward the underside of the horizontal platform, a second of the upright thick staves is configured to include a left side edge arranged to extend upwardly toward the underside of the horizontal platform and lie in spaced-apart confronting relation to the right side edge of the first of the upright thick staves, and a first of the upright thin staves is arranged to interconnect the left and right side edges and cooperate with the left and right side edges to define therebetween a vertical channel, the first of the thin staves is configured to provide the first material segment having the first density, and the first of the thick staves is configured to provide the second material segment having the second density~~.~~, and optionally;

~~31. The insulative cup of claim 30,~~ (a) wherein the first of the upright thin staves is located relative to the first and the second of the upright thick staves to cause the vertical channel to open inwardly into a lower interior region bounded by the horizontal platform and the floor-retaining flange~~.~~, or;

~~32. The insulative cup of claim 30,~~ (b) wherein the body further includes a web-support ring coupled to a lower end of the sleeve-shaped side wall and arranged to surround the floor-retaining flange and a web arranged to interconnect the web-support ring and the floor-retaining flange, and the first of the upright thin staves is located relative to the first and second of the upright thick staves to cause the vertical channel to open outwardly in a direction toward the web-support ring~~.~~, or;

~~33. The insulative cup of claim 30,~~ (c) wherein the floor-retaining flange has an annular shape and is arranged to surround a vertically extending central axis intercepting a center point of the horizontal platform and the first of the thin staves has an inner wall facing toward a portion of the vertically extending central axis passing through the lower interior region~~.~~, and optionally;

~~34. The insulative cup of claim 33,~~ wherein the floor further includes a platform-support member arranged to surround the floor-retaining flange and cooperate with the horizontal platform to form a downwardly opening floor cavity containing the alternating series of upright thick and thin staves therein~~.~~, or;

~~35. The insulative cup of claim 30,~~(d) wherein the body further includes a sleeve-shaped side wall comprising the insulative cellular non-aromatic polymeric material and the sleeve-shaped side wall includes an upright inner tab arranged to extend upwardly from the floor and configured to provide the plastically deformed first material segment having the first density, an upright outer tab arranged to extend upwardly from

the floor and to mate with the upright inner tab along an interface therebetween, and an upright fence arranged to interconnect the upright inner and outer tabs and surround the interior region and configured to provide the second material segment having the second density.

~~36~~13. The insulative cup of claim 1, wherein (i) the first material segment in the sheet of insulative cellular non-aromatic polymeric material has a relatively thin first thickness and the second material segment in the sheet of insulative cellular non-aromatic polymeric material has a relatively thicker second thickness~~.~~, and optionally;

~~37. The insulative cup of claim 36,~~ wherein the body further comprises cellular non-aromatic skin comprising a biaxially oriented polypropylene film adhered to the insulative cellular non-aromatic polymeric material~~.~~, or;

~~38. The insulative cup of claim 1,~~ (ii) wherein the body further comprises a graphics skin coupled to an exterior surface of a strip of the insulative cellular non-aromatic polymeric material and configured to include a film, an adhesive interposed between the film and the exterior surface, and an ink printed on the film to provide a graphics design~~.~~, and optionally;

~~39. The insulative cup of claim 38,~~ wherein the film is biaxially oriented polypropylene~~.~~, or;

~~40. The insulative cup of claim 1,~~ (iii) wherein the insulative cellular non-aromatic polymeric material comprises a polypropylene base resin having a high melt strength, a polypropylene copolymer resin, at least one nucleation agent, and gas means for expanding the resins to reduce density~~.~~, and optionally;

~~41. The insulative cup of claim 40,~~ (a) wherein the gas means comprises carbon dioxide~~.~~, or;

~~42. The insulative cup of claim 40,~~ (b) wherein the polypropylene base resin comprises broadly distributed molecular weight polypropylene characterized by a distribution that is unimodal~~.~~, or;

~~43. The insulative cup of claim 40,~~ (c) wherein the polypropylene base resin further includes a polypropylene homopolymer resin.

~~44~~14. The insulative cup of claim 1, wherein; ~~the insulative cellular non-aromatic polymeric materials comprises a polypropylene base resin having a high melt strength, a polypropylene homopolymer resin, at least one nucleation agent, and gas means for expanding the resins to reduce density.~~

~~45. The insulative cup of claim 44, wherein the gas means comprises carbon dioxide.~~

~~46. The insulative cup of claim 44, wherein the polypropylene base resin comprises a broadly distributed molecular weight polypropylene characterized by a distribution that is unimodal.~~

~~47. The insulative cup of claim 1,~~ (i) wherein the insulative cellular non-aromatic polymeric material comprises a broadly distributed molecular weight polypropylene characterized by a distribution that is unimodal~~.~~, or;

~~48. The insulative cup of claim 1,~~ (ii) wherein the first density is about 0.350 g/cm^3 and the second density is about 0.175 g/cm^3~~.~~, or;

~~49. The insulative cup of claim 1,~~ (iii) wherein the insulative cellular non-aromatic polymeric material is formed to include cells filled with gas and each cell is bounded by a cell wall provided in the insulative cellular non-aromatic polymeric material and configured to be inelastically deformable during exposure to localized plastic deformation~~.~~, or;

~~50. The insulative cup of claim 1,~~ (iv) wherein the insulative cellular non-aromatic polymeric material comprises a high melt strength polypropylene characterized by long-chain branching to provide a predetermined balance of processability and high melt elasticity.

~~51. An insulative cup comprising~~

~~a body including a sleeve-shaped side wall and~~

~~a floor coupled to the body to define an interior region bounded by the sleeve-shaped side wall and the floor, wherein the body comprises an insulative cellular polymeric material configured to provide means for enabling localized plastic deformation in at least one selected region of the body to provide a plastically deformed first material segment having a first density located in a first portion of the selected region of the body and a second material segment having a second density lower than the first cell volume located in an adjacent second portion of the selected region of the body without fracturing the insulative cellular polymeric material so that a predetermined insulative characteristic is maintained in the body,~~

~~wherein one of the selected regions of the body in which localized plastic deformation is enabled by the insulative cellular polymeric material is in a floor mount included in the body and coupled to a lower end of the sleeve-shaped side wall to lie in~~

~~spaced-apart relation to the rolled brim and to the floor to support the floor in a stationary position relative to the sleeve-shaped side wall to form the interior region and wherein the floor mount includes a web-support ring coupled to the lower end of the sleeve-shaped side wall and configured to provide the second material segment having the second density in the one of the selected regions of the body, a floor-retaining flange coupled to the floor and arranged to be surrounded by the web-support ring, and a web arranged to interconnect the floor-retaining flange and the web-support ring and configured to provide the first material segment having the first density in the one of the selected regions of the body.~~

~~52. The insulative cup of claim 51, wherein another of the selected regions of the body in which localized plastic deformation is enabled by the insulative cellular non-aromatic polymeric material is in the floor-retaining flange of the floor mount, the floor-retaining flange includes an alternating series of upright thick and thin staves arranged in side-to-side relation to extend upwardly from the web toward the interior region bounded by the sleeve-shaped side wall and the floor, a first of the upright thick staves is configured to include a right side edge extending upwardly from the web toward the interior region, a second of the upright thick staves is configured to include a left side edge arranged to extend upwardly from the web toward the interior region and lie in spaced-apart confronting relation to the right side edge of the first of the upright thick staves, and a first of the upright thin staves is arranged to interconnect the left side edge of the first of the upright thick staves and the right side edge of the second of the upright thick staves and to cooperate with the left and right side edges to define therebetween a vertical channel, the first of the upright thin staves is configured to provide the first material segment in another of the selected regions of the body, and the first of the upright thick staves is configured to provide the second material segment in another of the selected regions of the body.~~

~~53. The insulative cup of claim 52, wherein the first of the upright thin staves is located relative to the first and second of the upright thick staves to cause the vertical channel to open inwardly into a lower interior region bounded by the floor-retaining flange and a horizontal platform included in the floor and located above the floor-retaining flange.~~

~~54. The insulative cup of claim 52, wherein the first of the upright thin staves is located relative to the first and second of the upright thick staves to cause the vertical channel to open outwardly in a direction toward the web-support ring.~~

~~55. The insulative cup of claim 52, wherein the floor-retaining flange has an annular shape and is arranged to surround a vertically extending central axis intercepting a center point of the horizontal platform and the first of the thin staves has an inner wall facing toward a portion of the vertically extending central axis passing through the lower interior region.~~

~~56. The insulative cup of claim 55, wherein the floor further includes a platform-support member arranged to surround the floor-retaining flange and cooperate with the horizontal platform to form a downwardly opening floor cavity containing the alternating series of upright thick and thin staves therein.~~

~~57. The insulative cup of claim 51, wherein each of the web and the web-support ring has an annular shape.~~

~~58. The insulative cup of claim 57, wherein the floor-retaining flange has an annular shape.~~

~~59. The insulative cup of claim 51, wherein each of the floor-retaining flange, the web, and the web-support ring includes an inner layer having an interior surface mating with the floor and an overlapping outer layer mating with an exterior surface of the inner layer.~~

~~60. The insulative cup of claim 51, wherein the floor includes a horizontal platform bounding a portion of the interior region and a platform-support member coupled to the horizontal platform and arranged to extend downwardly away from the interior region into a space provided between the floor-retaining flange and the web-support ring to mate with each of the floor-retaining flange and the web-support ring.~~

~~61. The insulative cup of claim 60, wherein the platform-support member has an annular shape and is arranged to surround the floor-retaining flange and lie in an annular space provided between the horizontal platform and the web.~~

~~62. The insulative cup of claim 60, wherein each of the floor-retaining flange, the web, and the web-support ring includes an inner layer having an interior~~

surface mating with the floor and an overlapping outer layer mating with an exterior surface of the inner layer and the inner layer of each of the floor-retaining flange, the web, and the web-support ring is arranged to mate with the platform-support member.

63. A vessel comprising

a sleeve-shaped structure including a first end and a second end, the first end defining an opening into a storage space of the vessel, and

a floor coupled to the second end of the sleeve-shaped structure such that the floor and the sleeve-shaped structure define the storage space provided to store a product,

wherein the sleeve-shaped structure comprises a sheet comprising insulative cellular polymeric material providing means for insulating materials positioned in the storage space, maintaining the shape of the sleeve-shaped structure when the product is supported in the storage space, and enabling localized plastic deformation to form features in the insulative cellular polymeric material that permit gathering of the insulative cellular polymeric material as the sleeve-shaped structure is formed so that the insulative cellular polymeric material can be worked into the sleeve-shaped structure without bunching material or fracturing the sheet of insulative cellular polymeric material.

64. The vessel of claim 63, wherein the sleeve-shaped structure further comprises a skin comprising biaxially oriented polypropylene sheet adhered to the insulative cellular polymeric material.

65. The vessel of claim 64, wherein the insulative cellular polymeric material comprises high melt strength polypropylene.

66. The vessel of claim 64, wherein the sleeve-shaped structure comprises an elongated wall defining a first end and a second end, the elongated wall includes a first portion having a first generally uniform thickness and a first density, a second portion having a second generally uniform thickness greater than the first generally uniform thickness and a second density different from and less than the first density, and a third portion having a third generally uniform thickness greater than the first generally uniform thickness and a third density different from and less than the first density, and wherein the second and third portions are arranged relative to one another and interconnected by the first portion to form at least a portion of the elongated wall.

67. The vessel of claim 63, wherein the sleeve-shaped structure comprises an elongated wall defining a first end and a second end, the elongated wall includes a first portion having a first generally uniform thickness and a first density, a second portion having a second generally uniform thickness and a second density different from and less than the first density, and a third portion having a third generally uniform thickness and a third density different from and less than the first density, and wherein the second and third portions are arranged relative to one another and interconnected by the first portion to form at least a portion of the elongated wall.

68. A vessel comprising

a side wall comprising insulative cellular non-aromatic polymeric material, the side wall defining a first end and a second end, the elongated wall including a first portion providing a fence and having a first generally uniform thickness and a first density, a second portion providing an inner tab coupled to one end of the first portion and having a second generally uniform thickness and a second density different from the first density, and a third portion providing an outer tab coupled to an opposite end of the first portion and having a third generally uniform thickness and a third density different from the first density, the second and third portions being arranged relative to one another to form at least a portion of the side wall providing a bridge interconnecting the ends of the first portion,

a support structure coupled to the side wall proximate the second end, the support structure including a support flange extending from the side wall, and

a floor engaged with the support structure and the side wall to define a storage space in the vessel accessible from the first end of the side wall, the floor being supported by the support flange to support materials positioned in the storage space when the vessel is supported on the second end of the side wall.

69. The vessel of claim 68, wherein the side wall comprises insulative cellular non-aromatic polymeric material substrate and has a seam having a higher density than neighboring portions adjacent to the seam to cause the seam to have increased toughness as compared with neighboring portions of the side wall and the seam is compressed to a thickness substantially the same as the neighboring portions of the side wall enabling nesting of a greater number of insulative cups in a given length of a stacked set of insulative cups.

~~70. The vessel of claim 68, wherein the insulative cellular non-aromatic polymeric material comprises a polypropylene base resin having a high melt strength, at least one of a polypropylene copolymer and a polypropylene homopolymer resin, the two resins being blended with at least one nucleation agent and with a blowing agent comprising carbon dioxide injected into the resin blend to expand the resin and reduce density.~~

~~71. The vessel of claim 70, wherein the base resin comprises a base resin having a broadly distributed molecular weight polypropylene characterized by a distributation that is unimodal.~~

~~72. The vessel of claim 68, wherein the floor comprises insulative cellular non-aromatic polymeric material and the second density is greater than the first density.~~

~~73. The vessel of claim 72, wherein the third density is greater than the first density.~~

~~74. The vessel according to claim 63, wherein the support flange includes a plurality of depressions formed in the support flange to control gathering of the support flange when it is engaged with the floor.~~

~~75. The vessel of claim 69, wherein the vessel further comprises a rolled brim coupled to the side wall and the rolled brim comprises a first brim thickness B1 which is about equal to the first wall thickness T1 of the side wall and a relatively smaller second brim thickness B2 which is about equal to the second wall thickness T2.~~

~~76. The vessel according to claim 68, wherein the second and third portions are each compressed such that the thickness is reduced by about 50 percent.~~

~~77. The vessel of claim 68, wherein the support structure comprises insulative cellular polymeric material.~~

~~78. The vessel of claim 77, wherein the support structure includes a plurality of depressions formed in the inner periphery of the support flange and each depression comprises a localized area of higher density in the support structure.~~

~~79. The vessel of claim 78, wherein the vessel further comprises a first coupler, the support structure is secured to the side wall by the first coupler, and the first coupler has a density that is higher than a portion of the side wall adjacent to the first coupler.~~

~~80. The vessel of claim 79, wherein the density of the first coupler is higher than the density of a portion of the support structure adjacent to the first coupler.~~

~~81. The sheet of claim 80, wherein the side wall comprises an insulative cellular polymeric material, a film layer, an ink layer printed on the film layer, and an adhesive layer intereonnecting the film and ink layers to the insulative cellular polymeric material.~~

~~82. The sheet of claim 81, wherein the film layer comprises biaxially oriented polypropylene.~~