CLAIMS

What is claimed is:

1. A temperature insulated packaging system, the packaging system comprising:

a container having interior surface bounding an interior volume; and

a liner disposed within the interior volume of the container and at least partially bounding a compartment configured to receive an item for shipping, the liner comprising:

a first sleeve comprised of a first cellulose material and at least partially bounding a channel, the first sleeve having an outside wall disposed toward the container and an opposing inside wall disposed toward the compartment configured to receive the item for shipping, the channel being disposed between the inside wall and the outside wall, the first sleeve including one or more slots for folding into a folded configuration for insertion into the container; and

at least one insulation sheet disposed within the channel of the first sleeve, the at least one insulation sheet being comprised of a second cellulose material and having a plurality of recesses formed thereon,

wherein the at least one insulation sheet extends the length within the channel of the first sleeve such that when the first sleeve is folded into the folded configuration, the at least one insulation sheet includes one or more corresponding folds.

2. The temperature insulated packaging system of claim 1, wherein the cellulose material of the first sleeve comprises a folded sheet of paperboard.

3. The temperature insulated packaging system of claim 2, wherein the sheet of paperboard is more rigid than the at least one insulation sheet and/or has a thickness that is greater than a thickness of the at least one insulation sheet.

4. The temperature insulated packaging system of claim 2, wherein the paperboard comprises a tab and a slot, the tab being received within the slot so as to secure the paperboard in a continuous loop that encircles the channel.

5. The temperature insulated packaging system of claim 1, further comprising:

the first sleeve having a terminal end face with an opening that communicates with the channel; and

a cover flap projecting from the terminal end face of the first sleeve, the cover flap being folded so as to at least partially cover the opening.

6. The temperature insulated packaging system of claim 1, wherein the outside wall of the first sleeve is disposed directly against the interior surface of the container and the interior wall of the first sleeve at least partially bounds the compartment.

7. The temperature insulated packaging system of claim 1, wherein the first sleeve disposed within the interior volume of the container has a U-shaped configuration.

8. The temperature insulated packaging system of claim 1, wherein the liner further comprises:

a second sleeve at least partially bounding a channel, the second sleeve having an outside wall disposed toward the container and an opposing inside wall disposed toward the compartment configured to receive the item for shipping, the channel of the second sleeve being disposed between the inside wall and the outside wall of the second sleeve, the second sleeve being separate and discrete from the first sleeve and being positioned so that the compartment is at least partially disposed between the first sleeve and the second sleeve; and

at least one insulation sheet disposed within the channel of the second sleeve, the at least one insulation sheet being comprised of a cellulose material and having a plurality of recesses formed thereon.

9. The temperature insulated packaging system of claim 8, further comprising a first locking tab projecting from the first sleeve and a first locking slot being formed on the second sleeve, the first locking tab being received within the first locking slot so as to secure the first sleeve to the second sleeve.

10. The temperature insulated packaging system of claim 8, further comprising:

the second sleeve having a first terminal end face with an opening that communicates with the channel;

a first cover flap projecting from the first terminal end face of the second sleeve;

a first locking tab projecting from the first cover flap; and

a first locking slot being formed on the second sleeve, the first locking tab being received within the first locking slot so as to secure the first sleeve to the second sleeve.

11. The temperature insulated packaging system of claim 1, wherein the at least one insulation sheet comprises a plurality of separate sheets of paper that are stacked together, each of the plurality of separate sheets of paper being comprised of a cellulose material and having a plurality of recesses formed thereon.

12. The temperature insulated packaging system of claim 1, wherein the at least one insulation sheet comprises:

a first flat sheet having a top surface and an opposing bottom surface; and

a first embossed sheet having a top surface, an opposing bottom surface, and a plurality of spaced apart first embossings, each first embossing outwardly projecting from the top surface and terminating at a terminal end and bounding a recess openly exposed on the bottom surface, the terminal end of the first embossings being secured to the bottom surface of the first flat sheet by an adhesive.

13. The temperature insulated packaging system of claim 12, wherein the at least one insulation sheet further comprises:

a second flat sheet having a top surface and an opposing bottom surface; and

the first embossed sheet further comprising a plurality of spaced apart second embossings, each second embossing outwardly projecting from the bottom surface and terminating at a terminal end and bounding a recess openly exposed on the top surface, the terminal end of the second embossings being secured to the top surface of the second flat sheet by an adhesive so that the first embossed sheet is disposed between the first flat sheet

and the second flat sheet.

14. The temperature insulated packaging system of claim 13, further comprising a second embossed sheet having a plurality of outwardly projecting embossings, the embossings of the second embossed sheet being secured to the top surface of the first flat sheet by an adhesive.

15. The temperature insulated packaging system of claim 1, wherein the at least one insulation sheet comprises a plurality of vertically stacked insulation sheets, a plurality of pockets being bound between the plurality of vertically stacked insulation sheets.

16. The temperature insulated packaging system of claim 1, wherein the liner has an insulation rating (R Value) of in a range between about 3.5/inch to about 4.5/inch measured at a mean temperature of 75° F.

17. The temperature insulated packaging system of claim 1, wherein the container and the liner do not comprise expanded polystyrene or non-biodegradable plastics.

18. The temperature insulated packaging system of claim 1, wherein the first sleeve further comprises:

a first sidewall and an opposing second sidewall that each extend between the outside wall and the inside wall; and

a first slot and a spaced apart second slot that pass through the inside wall so as to communicate with the channel and extend between the first side wall and the second sidewall.