A bag having a front and back portion which are comprised of silicone or a similar elastomer. The front and back portion are identical in size and are sealed together along their sides and bottom with an opening along the top portion. The opening creates a cavity from which items are placed in and stored or transported for further use. A sealing mechanism on top of the bag seals items in the bag. The bag is water tight.
SILICONE BAG WITH SEAL

FIELD OF THE INVENTION

[0001] The present invention relates to a silicone bag having a seal.

BACKGROUND OF THE INVENTION

[0002] In the past, plastic bags have been used for transporting foods and liquids. These bags cannot be used for heating. Further these bags cannot be used in a microwave oven. Also, plastic bags are not reusable. Further, many of the plastic bags use potentially toxic chemicals.

[0003] Another way for transporting and storing food stuff is by plastic containers. These containers also contain harmful chemicals. These containers are bulky and take up a lot of room.

[0004] U.S. Pat. No. 4,842,670 relates to a method for forming silicone rubber vacuum bag assemblies which can be used repeatedly to debulk and autoclave composite layups. These bags can be formed of a single layup of uncured silicone rubber over a tool or a tooling device with one or more opposite sides being bent towards each other and having fasten ports used to allow the bag to be welded.

[0005] U.S. Pat. No. 5,665,301 relates to a unitary vacuum bag for forming a fiber reinforced composite article, made of a fabric mesh reinforced curable elastomer, having a smooth surface on both sides. The bag is constructed upon the surface of the article which is to be reproduced and upon a planar flange extension of the mold for the article.

[0006] U.S. Pat. No. 5,686,304 relates to a cell culture apparatus formed of a plurality of thin spaced, gas-permeable, silicone membranes sealed at their edges to form a bag-like vessel comprising one or more interior chambers suitable for containing cell culture media.

[0007] U.S. Pat. No. 6,632,164 relates to an apparatus for forming a bag assembly from a tube and a tubular flexible membrane operating in accordance with a four step process. The process includes clamping the tube within an open end of the membrane, injecting liquid adhesive into the open end of the membrane, and clamping the membrane and edge where the adhesive was injected, and heating and curing the assembly.

[0008] US patent publication 2006/0083883 relates to a flexible foodstuff mold for use in confectionary, bread making or baking, wherein the mold comprises a base wall extending from the base, and a rim projecting from the wall. The mold includes at least two or more handles and a rigid rim area at the vicinity of each handle, other areas of the rim being flexible.

[0009] US patent publication 2010/0218690 relates to a utensil for containing foodstuff, applicable to cooking in a microwave, including a receptacle made of an elastomer material with an access opening and a cover for covering the access opening. The receptacle has one or more walls including a bottom wall in elongated channel shape and opening edges defining access opening at a height greater than the bottom. The bottom wall has reinforcing ribs. The bottom wall is connected at its ends to end walls.

[0010] US patent publication 2012/0037618 relates to a kitchen container made of a flexible material such as a silicone elastomer, and it has the shape of a bowl with a base, a perimetric wall and a perimetric rim that form an upper opening. The wall is flexible enough to allow first and second opposite sides to be bent towards each other and have fastening elements to fasten the sides so that they overlap each other, and the rim forms two opposite openings separated by the overlapping portions. It can be used to cook in a microwave or conventional oven.

[0011] US patent publication 2011/0038564 relates to a reusable bag which is reusable by means of a top press and seal strip or strips, so that food stuffs or other items can be transported or stored in a sanitary condition. The bag may be composed entirely or in part of silicone so that it is durable, recyclable, impermeable to liquids and can withstand extremes of temperature making it suitable for freezing or thawing as well as transporting foods. The bag may be transparent, opaque or have artistic designs or measurements incorporated into its manufacturing.

SUMMARY OF THE INVENTION

[0012] The present invention relates to a bag having a front and back portion which are comprised of silicone or a similar elastomer. The front and back portion are identical in size and are sealed together along their sides and bottom with an opening along the top portion. This opening creates a cavity from which items may be placed in and stored or transported for further use. The bag has a sealing mechanism on top for sealing the contents of the bag within the bag.

[0013] It is an object of the present invention for the bag to be water tight.

[0014] It is an object of the present invention to have various designs on the bag.

[0015] It is an object of the present invention to have measurement quantities on the outside of the bag.

[0016] It is an object of the present invention for the bag to be reusable.

[0017] It is an object of the present invention to use the bag as a container for food stuff.

[0018] It is an object of the present invention to use the bag for liquids.

[0019] It is an object of the present invention for the bag to be recyclable.

[0020] It is an object of the present invention for the bag to be used in a freezer.

[0021] It is an object of the present invention for the bag to be used in a microwave.

[0022] It is an object of the present invention for the bag to be foldable.

[0023] It is an object of the present invention for the bag to contain odors from the contents of the bag.

[0024] It is an object of the present invention for the bag to be easy to clean.

[0025] It is an object of the present invention for the bag to be used so as to heat food.

[0026] It is an object of the present invention for the bag to be air tight.

[0027] It is an object of the present invention for the bag to comprise FDA food grade silicone.

[0028] It is an object of the present invention for the bag not to react with any of the contents of the bag including any food or beverages.

[0029] It is an object of the present invention for the bag to be dishwasher safe.

[0030] It is an object of the present invention to provide the bags in different sizes.
It is an object of the present invention for the bag to comprise a pattern silk screen on the bag. It is an object of the present invention for the bag to have a dust coating. It is an object of the present invention for the bag to have an integrated silicone top seal. It is an object of the present invention for the bag to have no seams and to be fully molded. It is an object of the present invention for the bag to be made as a single part in a compression mold. The silicone goes into all parts of the mold and then the mold is released. The silicone goes into all parts of the mold and then the mold is released.

It is an object of the present invention for the sealing mechanism to have an integrated seal which is molded as part of the bag. It is an object of the present invention for the sealing mechanism to comprise ribs pressed together with slots to create a seal to close the bag. It is an object of the present invention for the sealing mechanism to comprise the same silicone as the rest of the bag.

It is an object of the present invention for the sealing mechanism to work by one side of the bag has the ribs and slots which pushes into the other side of the bag which has ribs and slots. Pressure is applied to fit the rib into the slot and seal the bag. It is an object of the present invention for there to be a male and female side to the ribs and slots to fit together and lock, because of the shape of the rib. It is an object of the present invention for both sides to have an undercut to help hold the ribs in place.

It is an object of the present invention to have at least three ribs on each side of the bag. It is an object of the present invention to clamp the corners of the silicone bag. It is an object of the present invention to clamp the corners using plastic parts. It is an object of the present invention for the bag to have a clip mechanism.

It is an object of the present invention for the clip to be made out of pressure and/or ultra sonic welding. It is an object of the present invention for the clip to be made by co-molding. It is an object of the present invention for the clip to be made by injection molding. It is an object of the present invention for the clip to be made by a secondary process such as gluing.

It is an object of the present invention for the clip to be made in a separate process from the bag and get applied later. It is an object of the present invention for the clip to provide a place for the user to hold the bag or to attach to something else for easy transport. It is an object of the present invention for the bag to have a corner sealing mechanism located on one or more of the corners of the top of the bag. It is an object of the present invention for the corner sealing mechanism to be located on both corners of the top of the bag.

It is an object of the present invention for the corner sealing mechanism to be made of plastifule polypropylene. It is an object of the present invention for the bag to have a tightening mechanism that is placed over the sealing mechanism to increase the seal.

It is an object of the present invention for the tightening mechanism to have internal grooves. It is an object of the present invention for the bag to have a closing mechanism. It is an object of the present invention for the closing mechanism to have internal grooves. It is an object of the present invention for the silicone bag to have a thickness of 1 mm.

It is an object of the present invention to have a slit on the top of the bag to assist in opening the bag.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front view of the bag of the present invention. FIG. 2 is a rear view of the bag of the present invention.

FIG. 3 is an enlarged view of a clip mechanism of the bag of the present invention. FIG. 4 is an enlarged view of a clip mechanism of the bag of the present invention. FIG. 5 is a side view of a sealing mechanism of the bag of the present invention.

FIG. 6 is a front view of the bag of the present invention. FIG. 7 is a top view of the bag of the present invention. FIG. 8 is a front view of the bag of the present invention.

FIG. 9 is an enlarged view of a corner sealing mechanism of the bag of the present invention. FIG. 10 is a top view of a corner sealing mechanism of the bag of the present invention. FIG. 11 is an enlarged view of a corner sealing mechanism separate from the bag of the present invention.

FIG. 12 is an internal view of a corner sealing mechanism separate from the bag of the present invention. FIG. 13 is a side view of a sealing mechanism of the bag of the present invention.

FIG. 14 is a front view of a bag of the present invention. FIG. 15 is an enlarged view of a tightening mechanism and bag of the present invention.

FIG. 16 is an enlarged view of a tightening mechanism by itself of the present invention. FIG. 17 is a side view of a sealing mechanism and bag of the present invention. FIG. 18 is an enlarged view of a corner sealing mechanism on the corner of the bag of the present invention.

FIG. 19 is an enlarged view of a corner sealing mechanism on the corner of the bag of the present invention. FIG. 20 is a front view of the bag of the present invention. FIG. 21 is a front view of the bag of the present invention.

FIG. 22 shows a cross section of a sealing mechanism for the bag of the present invention. FIG. 23 shows a front view of the bag of the present invention.

FIG. 24 shows a front view of the bag of the present invention. FIG. 25 shows a side view of the bag of the present invention. FIG. 26 shows a cross-sectional view of the bag of the present invention.

FIG. 27 shows a top view of the bag of the present invention.
FIG. 28 shows a top view of the bag of the present invention.

FIG. 29 shows a top view of the bag of the present invention.

FIG. 30 shows a side view of the bag of the present invention.

FIG. 31 shows a front view of the bag of the present invention.

DETAILED DESCRIPTION

FIG. 1 shows the bag 10 having an integrated silicone sealing mechanism 12.

FIG. 2 shows the bag 10 which is made of a food grade silicone showing that there are no seams in the bag 10 which is fully molded. Further, FIG. 2 shows that the bag is made as a single part in a compression mold. FIG. 2 further shows the corner sealing mechanism 14. In a preferred embodiment, the corner sealing mechanism 14 is made using plastiscope polypropylene.

FIG. 3 shows the clip sandwich 16 shown as a thin piece of silicone to hold in place.

FIG. 4 shows the clip 16 can provide a place to hold the bag or clip to something else for easy transport.

FIG. 5 shows an integrated sealing mechanism 18 that is molded as part of the bag 10. FIG. 5 further shows ribs 20 that are pressed into slots 21 together to create a seal to close the bag 10. The connection uses the same silicone as the rest of the bag 10. There is no change in material.

FIG. 6 shows the front of the silicone bag 10.

FIG. 7 shows the opening 22 of the bag 10.

FIG. 8 shows the bag 40 having an integrated silicone sealing mechanism 42. The bag has a corner sealing mechanism 44 and a clip sandwich 46 that is shown as a thin piece of silicone to hold in place.

FIG. 9 shows the bag 40 having a corner sealing mechanism 44.

FIG. 10 shows a top view of an integrated silicone sealing mechanism 42 having a corner sealing mechanism 44.

FIG. 11 shows a corner sealing mechanism 44 having internal grooves 46, which is placed at an end of the bag 40 on top of the bag to assist in closing the bag 40.

FIG. 12 shows a corner sealing mechanism 44 having internal grooves 46.

FIG. 13 shows a corner sealing mechanism 44 and an integrated sealing mechanism 48 that is molded as part of the bag 40. Ribs 50 are pressed together with slots 51 to create a seal to close bag 40.

FIG. 14 shows bag 60 having an integrated seal 62. The bag has tightening mechanisms 64 and 66 that are placed at each end of bag 60 on top of integrated sealing mechanism 62, and a clip sandwich 68 that is shown as a thin piece of silicone to hold in place.

FIG. 15 shows tightening mechanism 66 and clip sandwich 68.

FIG. 16 shows tightening mechanism 66 having internal grooves 70. Tightening mechanism 66 helps to seal integrated sealing mechanism 62.

FIG. 17 shows bag 60 having tightening mechanism 64 and an integrated sealing mechanism 72 that is molded as part of bag 60. Ribs 74 are pressed together in slots 75 to create a seal to close bag 60.

FIG. 18 shows bag 80 having an integrated sealing mechanism 82 and a corner sealing mechanism 84.

FIG. 19 shows bag 80 having an integrated sealing mechanism 82 and a corner sealing mechanism 84.

FIG. 20 shows bag 80 having a corner sealing mechanism 84.

FIG. 21 shows bag 80 having a corner sealing mechanism 84.

FIG. 22 shows a cross section of sealing mechanism 90 having ribs 92 and slots 94.

FIG. 23 shows the bag 100 having a clip mechanism 102.

FIG. 24 shows the bag 100 having a clip mechanism 102.

FIG. 25 shows a side view of the bag 100.

FIG. 26 shows a cross section side view of the bag 100 from FIG. 23 through section A-A showing locking mechanism 104 which is comprised of ribs 106 fitting into slots 108.

FIG. 27 shows a side view of the bag 100 having clip mechanism 102.

FIG. 28 shows a top view of the bag 100 having slit 110 at the top of the bag to assist in opening the bag.

FIG. 29 shows a top view of the bag 100 having slit 110, the length of the bag is approximately 8-11" and the width is approximately ½ to 1".

FIG. 30 shows a side view of the bag 100.

FIG. 31 shows the bag 100 with a height of approximately 5-10".

1. A bag comprising:
   a front and back portion which are comprised of silicone or a similar elastomer;
   said front and back portion are identical in size and are sealed together along their sides and bottom with an opening along top portion;
   said opening creating a cavity from which items are placed in and stored or transported for further use;
   a sealing mechanism on top of said bag for sealing said items in said bag;
   said sealing mechanism and said bag is a single material molded together.

2. The bag of claim 1 wherein said sealing mechanism is an integrated silicone seal.

3. The bag of claim 1 wherein said bag has no seams.

4. The bag of claim 1 wherein said bag is made as a single part in a compression mold.

5. The bag of claim 1 wherein said sealing mechanism is an integrated seal that is molded as part of said bag.

6. The bag of claim 1 wherein said sealing mechanism comprises ribs pressed together with slots to create a seal to close said bag.

7. The bag of claim 1 wherein said sealing mechanism is same silicone as rest of said bag.

8. The bag of claim 1 further comprising a clip mechanism.

9. The bag of claim 8 wherein said clip mechanism provides a place to hold said bag or clip to something else for easy transport.

10. The bag of claim 8 wherein said clip mechanism assists in sealing a corner of said bag.

11. The bag of claim 1 further comprising a corner sealing mechanism that is located on one or more corners of said top of said bag.

12. The bag of claim 11 wherein said corner sealing mechanism is located on both corners of said top of said bag.
13. The bag of claim 1 further comprising a tightening mechanism which is placed over said sealing mechanism to increase seal.

14. The bag of claim 13 wherein said tightening mechanism has internal grooves.

15. The bag of claim 11 wherein said corner sealing mechanism comprises plastipure polypropylene.

16. The bag of claim 1 further comprising a closing mechanism.

17. The method of claim 16 wherein said closing mechanism has internal grooves.

18. The bag of claim 1 wherein said bag comprises designs on said front and/or back of said bag.

19. The bag of claim 1 wherein said bag provides measurement quantities on outside of said bag.

20. The bag of claim 1 wherein said bag is reusable.

21. The bag of claim 1 wherein said bag is used as a container for food stuff.

22. The bag of claim 1 wherein said bag is used for liquids.

23. The bag of claim 1 wherein said bag is recyclable.

24. The bag of claim 1 wherein said bag is used in a freezer.

25. The bag of claim 1 wherein said bag is used in a microwave.

26. The bag of claim 1 wherein said bag is foldable.

27. The bag of claim 1 wherein said bag contains odors from contents of said bag.

28. The bag of claim 1 wherein said bag is used to heat food.

29. The bag of claim 1 wherein said bag comprises FDA food grade silicone.

30. The bag of claim 1 wherein said bag does not react with any of said items in said bag including any food or beverages.

31. The bag of claim 1 wherein said bag is dishwasher safe.

32. The bag of claim 1 wherein said bag has a pattern silk screen on said bag.

33. The bag of claim 1 wherein said bag has a dust coating.

34. The bag of claim 1 wherein said bag is water tight.