FOOD GRADE CONTAINER

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ABSTRACT
Food grade container with a double wall structure that provides the benefits of insulating the contents from the environment and also serving to enhance the structural rigidity of the item in use. Multiple cavities are formed between the two walls designed to contain an insulating air barrier. The geometric structure of the cavities enhances the structural integrity by providing support for each wall and cushioning movement in one or both walls when constructed of an elastomer.
FIELD OF THE INVENTION

The present invention relates to food containers and in particular to a food grade container.

The invention has been developed primarily for use in containers for cooking and/or storing of food and will be described hereinafter with reference to this application. However, it will be appreciated that the invention is not limited to this particular field of use.

BACKGROUND OF THE INVENTION

Cookware and food storage containers are typically manufactured from a range of materials, including such materials as glass, plastic, and metal. However, these materials have notable drawbacks that prevent them from being used in a wide range of settings. In particular, cookware manufactured from metals is not suitable for use in a microwave oven due to arcing, while certain plastics are known to leach toxic compounds such as phthalates or in the case of Teflon, perfluorooctanoic acid, when exposed to heat. In the case when glass is used in cookware, food has a tendency to stick to the glass surface making it difficult to clean.

More recently, silicone rubber has presented itself as a useful material for use in cookware, having properties that enable it to be safely used in microwave ovens, dishwashers, and freezers, as well as being both a food grade and non-stick material. However, silicone rubber suffers from a distinct lack of rigidity, which is particularly noticeable when it is used in such cookware as muffin trays, where distortion of the tray has a tendency to crush the muffins in the wells of the tray. This shortcoming has prompted manufacturers to develop cookware that comprises a silicone rubber/metal hybrid. However, the use of metal prevents the hybrid material from being used in microwave ovens.

The present invention seeks to provide a food grade container, which will overcome or substantially ameliorate at least some of the deficiencies of the prior art, or to at least provide an alternative.

It is to be understood that, if any prior art information is referred to herein, such reference does not constitute an admission that the information forms part of the common general knowledge in the art, in Australia or any other country.

SUMMARY OF THE INVENTION

According to a first aspect of the present invention, there is provided a food grade container comprising at least one wall being manufactured from an elastomer, the at least one wall having a first surface and an opposing second surface, and a plurality of cavities formed in the at least one wall between the first and second surfaces.

Advantageously, the plurality of cavities defines a plurality of air gaps for insulating the contents in the food grade container in use.

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Advantageously, the at least one wall being manufactured from a flexible material such as an elastomer affords the at least one wall of the food grade container with a degree of flexibility that does not impact on the overall structural rigidity of the container.

Advantageously, the at least one wall being manufactured from an elastomeric material reduces the risk of the food grade container scratching a surface upon which it is placed.

Preferably, the cavities are elongated.

Advantageously, the plurality of cavities being elongated defines a plurality of elongated air gaps for insulating the contents in the food grade container in use.

Advantageously, the cavities being elongated provides the at least one wall with a plurality of elongated air gaps for insulating the food grade container in use.

Preferably, the cavities extend between opposing edges of the at least one wall.

Preferably, the cavities are substantially parallel to each other.

Preferably, the cavities are spaced substantially uniformly from each other.

Preferably, the cavities are substantially parallel to the first and second surfaces.

Preferably, the at least one wall comprises a plurality of webs that define the plurality of cavities.

Preferably, the plurality of webs extends between the first and second surfaces.

Advantageously, the rigidity of the food grade container is realized by virtue of the webs interposed between the plurality of cavities reinforcing the at least one wall of the food grade container.

Preferably, the plurality of cavities are distributed substantially uniformly along the at least one wall.

Advantageously, the uniform distribution of cavities along the at least one wall affords the food grade container with uniform insulation around the food grade container.

Advantageously, the uniform distribution of cavities along the at least one wall corresponds to a uniform distribution of webs reinforcing the food grade container to provide a uniform reinforcement around the food grade container.

Preferably, the plurality of cavities are distributed substantially non-uniformly along the at least one wall.

Advantageously, the non-uniform distribution of cavities along the at least one wall corresponds to a non-uniform distribution of webs reinforcing the food grade container to enable parts of the food grade container to have a greater reinforcement than other parts of the food grade container.

Preferably, the plurality of cavities comprise at least one cross section selected from the set of cross sections comprising: circular, semi-circular, square, rectangular, triangular and oval cross sections or any combinations thereof.

Advantageously, the at least one cross section being selected from a set of cross sections enables the structural rigidity of parts of the food grade container to be controlled according to the cross section selected.

Preferably, the plurality of cavities are elongated and the at least one cross section is a triangular cross section.

Advantageously, the plurality of elongated cavities having the triangular cross section affords the at least one wall of the food grade container with structural rigidity.

Preferably, the plurality of cavities are alternately arranged such that a base of a first triangular elongated cavity corresponds to a portion of the first surface and a base of an adjacent triangular elongated cavity corresponds to a portion of the second surface.
[0032] Advantageously, the plurality of cavities having the triangular cross section being alternately arranged affords the at least one wall of the food grade container with structural rigidity.

[0033] Preferably, the at least one wall comprises a plurality of webs interposed between the plurality of triangular cavities, the plurality of webs forming a generally zig-zag pattern between the first surface and the second surface.

[0034] Advantageously, the plurality of webs zigzaggng between the first and second surface of the at least one wall affords the at least one wall of the food grade container with structural rigidity.

[0035] Preferably, the at least one cross section is two cross sections corresponding to a first cross section and a second cross section.

[0036] Advantageously, the base and the side wall comprising cavities having one of two cross sections enables parts of the food grade container to have a greater reinforcement than other parts of the food grade container.

[0037] Preferably, the elastomer is silicone rubber.

[0038] Advantageously, the at least one wall being manufactured from silicone rubber ensure that the food grade container will be non-stick.

[0039] Advantageously, the at least one wall being manufactured from silicone rubber ensure that the food grade container will be suitable for use in a microwave oven.

[0040] Advantageously, the at least one wall being manufactured from silicone rubber ensure that the food grade container will be suitable for use in a freezer.

[0041] Advantageously, the at least one wall being manufactured from silicone rubber ensure that the food grade container will be suitable for use in an oven.

[0042] Advantageously, the at least one wall being manufactured from silicone rubber ensure that the food grade container will be suitable for use in a dishwasher.

[0043] Advantageously, the at least one wall being manufactured from silicone rubber ensure that the food grade container will be non-toxic.

[0044] Advantageously, the at least one wall being manufactured from silicone rubber ensure that the food grade container will resist microbial growth.

[0045] Advantageously, the at least one wall being manufactured from silicone rubber ensure that the food grade container will be stain resistant.

[0046] Advantageously, the at least one wall being manufactured from silicone rubber ensure that the food grade container will be odour resistant.

[0047] Advantageously, the at least one wall being manufactured from silicone rubber ensure that the food grade container will be heat resistant.

[0048] Preferably, the food grade container comprises insulation disposed within each of the plurality of cavities.

[0049] Advantageously, insulation material introduced into each of the plurality of cavities supplements the existing insulation provided by the air gaps associated with the plurality of cavities.

[0050] Preferably, the at least one wall includes:

[0051] a side wall which extends substantially upwardly and terminates at an opening.

[0052] Preferably, the container includes a base from which the side wall extends.

[0053] Advantageously, the at least one wall forming the base and the side wall defines the open volume of the food grade container.

[0054] Preferably, the plurality of cavities in the side wall are elongated and extend substantially vertically.

[0055] Advantageously, the elongated cavities extending substantially vertically from the base to the opening provide the food grade container with insulation substantially along the length of the food grade container.

[0056] Preferably, the plurality of cavities in the side wall are elongated and extend substantially horizontally.

[0057] Advantageously, the elongated cavities extending substantially horizontally around the side wall provides the food grade container with insulation substantially along the length of the food grade container.

[0058] Preferably, the at least one wall includes a container lid to close the food grade container in use.

[0059] Advantageously, the container lid closes the food grade container to provide additional insulation.

[0060] Preferably, the at least one wall includes:

[0061] a base; and

[0062] one or more side walls extending upwardly from the base and terminating at an opening.

[0063] Advantageously, the food grade container comprising the at least one wall ensures that the plurality of elongated cavities extending through the base and the one or more side walls of the food grade container define a plurality of air gaps for insulating the contents in the food grade container in use.

[0064] Advantageously, the food grade container comprising the at least one wall ensures that the plurality of elongated cavities extending through the base and the one or more side walls of the food grade container define a plurality of air gaps for insulating the food grade container in use.

[0065] Advantageously, the at least one wall forming the base and the side walls define the open volume of the food grade container.

[0066] Preferably, the base is generally rectangular and the one or more side walls are three generally rectangular side walls, two of the three side walls being opposing side walls with the third side wall extending therebetween.

[0067] Advantageously, the base and three side walls of the food grade container define a food grade tray.

[0068] Preferably, the plurality of cavities in the one or more side walls are elongated and extend from the base to the opening.

[0069] Advantageously, the elongated cavities in the one or more side walls extending from the base to the opening provide the food grade container with insulation substantially along the length of the food grade container.

[0070] Preferably, the at least one wall includes:

[0071] a body comprising one or more apertures;

[0072] one or more receptacles, each receptacle having a base and a side wall extending upwardly from the base and terminating at an opening, each opening being aligned with a corresponding aperture of the base and attached thereto.

[0073] Advantageously, the food grade container comprising the at least one wall ensures that the plurality of elongated cavities extending through the one or more receptacles and the body of the food grade container define a plurality of air gaps for insulating the contents in the food grade container in use.

[0074] Advantageously, the food grade container comprising the at least one wall ensures that the plurality of elongated
cavities extending through the one or more receptacles and the body of the food grade container define a plurality of air gaps for insulating the food grade container in use.

[0075] Preferably, the one or more apertures are arranged in the body in an array format.

[0076] Advantageously, the one or more arrayed apertures correspond to one more receptacles being arrayed in the food grade container to define a tray for receiving contents therein for baking or freezing.

[0077] In one embodiment, the food grade container comprises a body wherein: the first surface is defined by an inner layer and the second surface is defined by a fluted outer layer.

[0078] In this embodiment, the fluted outer layer preferably defines a plurality of external grooves.

[0079] Preferably, the food grade container further comprises an outer housing comprising a wall having an inner surface, wherein at least a portion of the body is configured to locate within the outer housing such that circumferential contact portions of the body abut the inner surface of the outer housing to enclose each of the plurality of grooves to define a further plurality of cavities between the body and the outer housing.

[0080] Preferably, the food grade container further comprises comprising insulation disposed within each of the plurality of cavities.

[0081] Preferably, the at least one wall of each of the first body and the second body includes:

[0082] a side wall which extends generally upwardly and terminates at an opening.

[0083] Preferably, the body and the outer housing each includes a base from which the corresponding wall extends.

[0084] Other aspects of the invention are also disclosed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0085] Notwithstanding any other forms which may fall within the scope of the present invention, preferred embodiments of the invention will now be described, by way of example only, with reference to the accompanying drawings in which:

[0086] FIG. 1 is an isometric view of a food grade container in accordance with a preferred embodiment of the present invention;

[0087] FIG. 2 is an isometric view of a food grade container in accordance with another preferred embodiment of the present invention;

[0088] FIG. 3 is an isometric view of a food grade container in accordance with another preferred embodiment of the present invention;

[0089] FIG. 4 is an isometric view of a food grade container in the form of a tray in accordance with another preferred embodiment of the present invention;

[0090] FIG. 5 shows isometric views of a food grade container in the form of a tray in accordance with another preferred embodiment of the present invention, the tray being shown from (i) above and (ii) below;

[0091] FIG. 6 is an isometric view of a food grade container in accordance with another preferred embodiment of the present invention; and

[0092] FIG. 7 is an isometric view of a food grade container in accordance with another preferred embodiment of the present invention.
contents, respectively, from the container 10, and burning themselves in the process. In the case where the food grade container 10 is used for baking a cake or muffin, the pliability of the food grade container 10 is still sufficient to allow a user to easily remove the baked goods from the food grade container 10 without damaging the structural integrity of the baked goods.

[0101] FIG. 2 shows an alternative embodiment of a food container 10b, which is similar to the food container 10. In this embodiment however, the elongated cavities 60b are substantially rectangular in cross section. The webs 70b in this embodiment are thicker than those of the container 10 and thus provide greater structural rigidity.

[0102] FIG. 3 shows an alternative embodiment of a food container 10c, which is also similar to the food container 10. In this embodiment, the elongated cavities 60c are triangular in cross section. Further, the elongated cavities 60c are arranged such that they are alternately inverted, in that each triangle shares a side with an adjacent triangle and opposing bases of the triangles are formed by the external 32 and internal 35 surfaces of the side wall 30 respectively. The webs 70c in this embodiment are generally arranged in a zig-zag fashion and thus provide greater structural rigidity than webs 70 (see FIG. 1) and webs 70b (see FIG. 2).

[0103] In other embodiments, the elongated cavities 60 are not limited to being distributed substantially uniformly, but may be non-uniformly distributed. This arrangement provides non-uniform distribution of webs 70 thereby enabling certain parts of the container 10 to have a greater or lesser structural rigidity than other parts of the container 10.

[0104] In other embodiments, the elongated cavities 60 in the side wall 30 of the container 10 are not limited to extending from the base 20 to the opening 50 of the container. For example, the cavities 60 may extend substantially horizontally around the side wall 30.

[0105] In other embodiments, the elongated cavities 60 may have any desirable cross section that provides the air gaps for insulating the food grade container 10 and the food contained therein.

[0106] In other embodiments, the elongated cavities 60 in the one container may also comprise combinations of different cross sections. For example, in one arrangement, one set of elongated cavities (not shown) may have a circular cross section, and a second set of elongated cavities (not shown) may have a rectangular cross section. Given that elongated cavities with one cross section may afford the food grade container 10 with a greater structural rigidity than elongated cavities with another, it is possible to produce a food grade container 10 in which parts of the food grade container 10 have a greater structural rigidity than other parts, which would be advantageous in embodiments where certain parts of the food grade container 10 need to be more pliable than others.

[0107] In other embodiments, the food grade container 10 may comprise insulation (not shown) disposed within each of the plurality of elongated cavities 60 to supplement the existing insulation provided by the air gaps defined by the plurality of elongated cavities 60. For example, the insulation may be a polyurethane foam.

[0108] In other embodiments, the container 10 may further comprise a container lid (not shown) to close the container 10 in use. The wall structure of the container lid is ideally the same as the side wall 30, such that the first surface and the opposing second surface of the container lid have the same predetermined thickness with a plurality of parallel and spaced elongated cavities (not shown) therebetween. The container lid may be mounted in any suitable manner to close the food grade container 10. By closing the food grade container 10 with the container lid, the contents within the open volume 50 of the food grade container 10 are further insulated, thereby enabling the temperature of the contents to remain at the desired temperature for longer.

[0109] The side wall 30 in FIGS. 1 to 3 is shown as such to reveal the cross section extending therethrough. It will be appreciated that for practical purposes, the side wall 30 in each of these embodiments will be sealed at their respective top edges to enable the corresponding food grade container 10, 10b, 10c to function as designed.

[0110] FIG. 4 shows a food grade container in the form of a tray 100 according to another embodiment of the present invention, which comprises a rectangular base 120 and three rectangular side walls 130, 140, 150. The three side walls 130, 140, 150 are attached via their respective bottom edges 130d, 140d, 150d to three side edges of the base 120 and extend upwardly from the base 120. The two longer side walls 130, 150, being opposing side walls, are joined via one of their side edges 130b, 150b to the corresponding side edge 140a, 140b of the third side wall 140 located therebetween. The end opposite to side wall 140 is open.

[0111] The wall structure of the base 120 and the three side walls 130, 140, 150 of the tray 100 are the same as the sidewall 30 of the food container 10c which has the alternating inverted triangular cavities 60c given in this embodiment as reference numeral 180. The elongated cavities 180 in the side walls 130, 140, and 150 extend downwardly while the elongated cavities 180 in the base 120 extend horizontally from the open end to the side wall 140.

[0112] The side walls 130, 140, 150 and the base 120 in FIG. 4 are shown as such to reveal the cross section extending therethrough. It will be appreciated that for practical purposes, the side walls 130, 140, 150 will be sealed at their respective top edges 130c, 140c, 150c and the base 120 will be sealed at the front edge 120c and rear edge (not shown) thereof to enable the tray 100 to function as designed.

[0113] FIG. 5 shows a food grade container in the form of another tray 200 according to another embodiment of the present invention, which comprises a generally rectangular shaped body 201 having a top surface 202, a bottom surface 203, two side edges 204, 205, a front edge 206, and a rear edge (not shown). The body 201 comprises eight circular apertures 207a to 207h that extend from the top surface 202 to the bottom surface 203 in a general array format. The wall structure of the body 201 is the same as the sidewall 30 of the food container 10c which has the alternating inverted triangular cavities 60c given in this embodiment as reference numeral 280. The elongated cavities 280 in the body 201 extend from the front edge 206 to the rear edge of the body 201.

[0114] The tray 200 further comprises eight receptacles 210a to 210h with a generally similar structure to the container 10c described above. In this embodiment, however, the corresponding side wall 230a to 230h of each of the receptacles 210a to 210h extends conically upwardly from the corresponding base 220a to 220h to terminate at the opening (not shown) of the corresponding receptacle 210a to 210h to define a generally bowl-like structure. The open volume 240a to 240h defined by the base 220a to 220h and the corresponding side wall 230a to 230h of each receptacle 210a to 210h
has a corresponding bowl-like structure for receiving and holding contents therein in use.

[0115] The opening (not shown) of each receptacle 210a to 210h is substantially aligned with a corresponding one of the eight apertures 207a to 207h in the body 201 such that the opening engages with the bottom surface 203 of the body 201 at the corresponding aperture 207a to 207h to form an integral attachment to the body 201. The eight receptacles 210a to 210h of the tray 200 are thus arranged in an array format with spacing therebetween. The front edge 206 and the apertures 207 of the body 201 are shown as such in FIG. 5 so as to reveal the cross section extending through the body 201. It will be appreciated that for practical purposes, the front edge 206 will be sealed and the apertures 207 of the body 201 will be sealed so that the internal surface of each aperture 207 and the internal surface of the corresponding bowl-like receptacle 210a to 210h forms a continuous surface.

[0116] In other embodiments, the tray 200 is not limited to just eight receptacles 210a to 210h, but may comprise one receptacle (not shown) or more than one receptacle as is desired.

[0117] In other embodiments, the body 210 of the tray 200 is not limited to having a generally rectangular configuration, but may take any configuration, including but not limited to: circular, square, oval, triangular, or an irregular configuration.

[0118] In other embodiments, the tray 200 is not limited to a tray for baking cakes or muffins as shown in FIG. 5, but may be a tray (not shown) that is used for making ice cubes when placed in a freezer.

[0119] FIG. 6 shows a food grade container 300 according to another preferred embodiment of the present invention. In this embodiment, the food grade container 300 comprises an insert portion 310 and an outer housing portion 350, which is configured to receive the insert portion 310 therein in use.

[0120] As shown in FIG. 6 (i), the insert portion 310 comprises a circular base 320 and a side wall 330 that extends upwardly from the base 320 to terminate at an opening 340. The base 320 and the side wall 330 together define a space 350 for receiving and holding contents, typically a beverage, therein in use.

[0121] The structure of the side wall 330 comprises an inner layer 332 which defines the first surface, and a generally fluted outer layer 335 which defines the second surface. The outer layer 335 also defines the plurality of cavities of between the inner layer 332 and the outer layer 335. The outer layer 335 defines a plurality of spaced apart elongated grooves 360, which extend upwardly from the base 320 substantially to the opening 340. The elongated grooves 360 are substantially parallel to each other and are distributed uniformly around the side wall 330. The elongated grooves 360 are generally triangular in cross section. The fluted outer layer 335 also defines circumferential contact portions 362 which are generally defined by the peaks of the flutes.

[0122] The base 320 can include elongated cavities 360 therein, which can extend generally horizontally.

[0123] As shown in FIG. 6 (i), the first body 310 further comprises a lip portion 370 that extends outwardly from the side wall 330, and a neck portion 372 that extends upwardly from the lip portion 370. The lip portion 370 and the neck portion 372 are shaped to receive a container lid having a skirt portion (not shown) that is of complementary dimensions to the neck portion 372 so as to close the container 300, thereby insulating the contents of the container 300 in use.

[0124] The insert portion 310 is manufactured from an elastomer such as silicone rubber to afford the first body 310 with a wide range of properties including: non-stick, non-toxic (i.e. food grade), resists microbial growth, stain resistant, odour resistant, and heat resistant. The first body 310 being manufactured solely from silicone rubber ensures that it can be safely used in a microwave oven, an oven and a freezer.

[0125] As shown in FIG. 6 (ii), the housing portion 350 comprises a side wall 352 having an inner surface 353 and an outer surface 354. If desired, the housing portion 350 can also comprise a base wall 351. The housing portion 350 may be manufactured from any suitable material such as plastics.

[0126] In use, the insert portion 310 configured to locate within the internal volume of the housing portion 350 such that the contact portions 362 of the insert portion 310 abuts substantially against the inner surface 353 of the housing portion 350. Thus, each of the plurality of grooves 360 will define a plurality of cavities between the inner layer 332 of the insert portion 310 and the housing portion 350.

[0127] In other embodiments, only the outer surface 335 of the side wall 330 may be shaped so that it defines a plurality of grooves (not shown). As such, the inner surface 332 of the side wall 330 may be a smooth, continuous surface (not shown).

[0128] In other embodiments, the plurality of cavities (not shown) may be distributed substantially non-uniformly around the side wall 330.

[0129] In other embodiments, the plurality of grooves are not limited to being generally triangular in cross section as described above, but may instead be generally semi-circular, square, rectangular, or oval in cross section.

[0130] In other embodiments, the plurality of grooves in the side wall 330 are not limited to being of the same cross-section, but instead, the grooves (not shown) around the side wall 330 may be comprised of a combination of cross-sections.

[0131] In other embodiments, the food grade container 300 may further comprise insulation (not shown) such as, for example, polyurethane foam, disposed within each of the plurality of cavities defined between the outer surface 335 of the first body 310 and the inner surface 353 of the housing portion 350.

[0132] In other embodiments, the plurality of grooves in the side wall 330 are not limited to extending vertically from the base 320 to the opening 340, but may instead be horizontally or diagonally disposed around the side wall 330.

[0133] While not shown in FIG. 6, it will be appreciated that the food grade container 300 may further comprise a container lid (not shown) so as to close the food grade container 300 in use.

[0134] FIG. 7 shows an alternative embodiment of a food container 10, which is similar to the food container 10. In this embodiment however, the elongated cavities 60 are substantially oval or oblong in cross section.

INTERPRETATION

Embodiments

[0135] Reference throughout this specification to “one embodiment” or “an embodiment” means that a particular feature, structure or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Thus, appearances of the phrases “in
one embodiment” or “in an embodiment” in various places throughout this specification are not necessarily all referring to the same embodiment, but may. Furthermore, the particular features, structures or characteristics may be combined in any suitable manner, as would be apparent to one of ordinary skill in the art from this disclosure, in one or more embodiments. [0136] Similarly it should be appreciated that in the above description of example embodiments of the invention, various features of the invention are sometimes grouped together in a single embodiment, figure, or description thereof for the purpose of streamlining the disclosure and aiding in the understanding of one or more of the various inventive aspects. This method of disclosure, however, is not to be interpreted as reflecting an intention that the claimed invention requires more features than are expressly recited in each claim. Rather, as the following claims reflect, inventive aspects lie in less than all features of a single foregoing disclosed embodiment. Thus, the claims following the Detailed Description of Specific Embodiments are hereby expressly incorporated into this Detailed Description of Specific Embodiments, with each claim standing on its own as a separate embodiment of this invention. [0137] Furthermore, while some embodiments described herein include some but not other features included in other embodiments, combinations of features of different embodiments are meant to be within the scope of the invention, and form different embodiments, as would be understood by those in the art. For example, in the following claims, any of the claimed embodiments can be used in any combination. Different Instances of Objects [0138] As used herein, unless otherwise specified the use of the ordinal adjectives “first”, “second”, “third”, etc., to describe a common object, merely indicate that different instances of like objects are being referred to, and are not intended to imply that the objects so described must be in a given sequence, either temporally, spatially, in ranking, or in any other manner. Specific Details [0139] In the description provided herein, numerous specific details are set forth. However, it is understood that embodiments of the invention may be practiced without these specific details. In other instances, well-known methods, structures and techniques have not been shown in detail in order not to obscure an understanding of this description. Terminology [0140] In describing the preferred embodiment of the invention illustrated in the drawings, specific terminology will be resorted to for the sake of clarity. However, the invention is not intended to be limited to the specific terms so selected, and it is to be understood that each specific term includes all technical equivalents which operate in a similar manner to accomplish a similar technical purpose. Terms such as “forward”, “rearward”, “radially”, “peripherally”, “upwardly”, “downwardly”, and the like are used as words of convenience to provide reference points and are not to be construed as limiting terms. Comprising and Including [0141] In the claims which follow and in the preceding description of the invention, except where the context requires otherwise due to express language or necessary implication, the word “comprise” or variations such as “comprises” or “comprising” are used in an inclusive sense, i.e. to specify the presence of the stated features but not to preclude the presence or addition of further features in various embodiments of the invention. [0142] Any one of the terms: including or which includes or that includes as used herein is also an open term that also means including at least the elements/features that follow the term, but not excluding others. Thus, including is synonymous with and means comprising. Scope of Invention [0143] Thus, while there has been described what are believed to be the preferred embodiments of 1. A food grade container comprising at least one wall being manufactured from an elastomer, the at least one wall having a first surface and an opposing second surface, and a plurality of cavities formed in the at least one wall between the first and second surfaces. 2. A food grade container as claimed in claim 1, wherein the cavities are elongated. 3. A food grade container as claimed in claim 1, wherein the cavities extend between opposing edges of the at least one wall. 4. A food grade container as claimed in claim 1, wherein the cavities are substantially parallel to each other. 5. A food grade container as claimed in claim 1, wherein the cavities are spaced substantially uniformly from each other. 6. A food grade container as claimed in claim 1, wherein the at least one wall comprises a plurality of webs that define the plurality of cavities. 7. A food grade container as claimed in claim 1, wherein the at least one wall comprises a plurality of webs that define the plurality of cavities. 8. A food grade container as claimed in claim 7, wherein the plurality of webs extends between the first and second surfaces. 9. (canceled) 10. A food grade container as claimed in claim 1, wherein the plurality of cavities are distributed substantially non-uniformly along the at least one wall. 11. A food grade container as claimed in claim 1, wherein the plurality of cavities comprises at least one cross section selected from the group consisting of circular, semi-circular, square, rectangular, triangular and oval cross-sections and any combinations thereof. 12. (canceled) 13. A food grade container as claimed in claim 1, wherein the plurality of cavities are alternately arranged such that a base of a first triangular elongated cavity corresponds to a portion of the first surface and a base of an adjacent triangular elongated cavity corresponds to a portion of the second surface. 14. A food grade container as claimed in claim 13, wherein the at least one wall comprises a plurality of webs interspersed between the plurality of triangular cavities, the plurality of webs forming a generally zig-zag pattern between the first surface and the second surface. 15. (canceled) 16. A food grade container as claimed in claim 1, wherein the elastomer is silicone rubber.
17. A food grade container as claimed in claim 1, further comprising insulation disposed within each of the plurality of cavities.

18. A food grade container as claimed in claim 1, wherein the at least one wall forms a side wall which extends substantially upwardly and terminates at an opening.

19. A food grade container as claimed in claim 18 wherein the container includes a base from which the at least one wall extends.

20. (canceled)

21. A food grade container as claimed in claim 18 wherein the plurality of cavities in the at least one wall are elongated and extend substantially horizontally.

22. A food grade container as claimed in claim 1, wherein the at least one wall includes a container lid to close the food grade container in use.

23. A food grade container as claimed in claim 19, wherein the at least one wall extends upwardly from the base and terminates at an opening.

24. A food grade container as claimed in claim 23, wherein the base is generally rectangular and further comprising three generally rectangular side walls, two of the three side walls being opposing side walls with the third side wall extending therebetween.

25-27. (canceled)

28. A food grade container as claimed in claim 1, comprising body wherein:
   the first surface is defined by an inner layer and the second surface is defined by a fluted outer layer.

29. A food grade container as claimed in claim 28, wherein the fluted outer layer defines a plurality of external grooves.

30. A food grade container as claimed in claim 29 further comprising an outer housing comprising a wall having an inner surface, wherein at least a portion of the body is configured to locate within the outer housing such that circumferential contact portions of the body abut the inner surface of the outer housing to enclose each of the plurality of grooves to define a further plurality of cavities between the body and the outer housing.

31. A food grade container as claimed in claim 30, further comprising insulation disposed within each of the plurality of cavities.

32. A food grade container as claimed in claim 28, wherein the at least one wall of each of the first body and the second body includes:
   a side wall which extends generally upwardly and terminates at an opening.

33. A food grade container as claimed in claim 30, wherein the body and the outer housing each includes a base from which the corresponding wall extends.

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