A disposable food packaging ideal for use in feeding an infant or child, the packaging having rounded corners to permit easy insertion and removal from a crowded, diaper bag, purse, or other crowded carrying environment. Additionally, the packaging is contoured for easy handling and use. Further, the smooth corners minimize the risk of scratching an infant or child when the contents are expressed into mouth of the consumer.
DISPOSABLE FOOD PACKAGING

FIELD OF THE INVENTION

[0001] The present invention relates to food packaging products in general and more particularly disposable baby food packaging materials.

BACKGROUND

[0002] Commercial disposable food packaging must balance the interests of providing a sanitary environment for a dispensable consumable product while providing the consumer with a portable and manageable packaging. Infant and baby food packing, in particular, must be well-suited for transportation in a crowded diaper bag, purse, or other location where the packaging will be subject to physical forces, including compression, and in turn may crack, fracture, or rupture—resulting in product leakage. Compressible food packages currently in use are often rectangular with sharp corners. Problematically, this poses a safety risk as the sharp corners may scratch a child or infant when the food contained within is squeezed directly into the mouth of the consumer. Additionally, the rectangular shape and sharp corners make product use awkward and further make the packaging relatively difficult to quickly insert into a crowded purse, diaper bag, backpack, and the like. Furthermore, the forces incident to placing prior art packaging in a crowded-bag environment may cause product leakage where the prior art packaging is unable to withstand mechanical forces and the packaging ruptures.

[0003] Prior art food packaging solutions exist, however, none are particularly well suited to address the present problem. For example, Niggemeyer, U.S. Pat. No. 6,981,614 teaches a dispensing pouch having a flexible and collapsible leak proof container with a preferably heat-sealed perimeter, and having a pair of tapered side walls, a nozzle, and a removable end cap. Niggemeyer is adapted for dispensing decorative confectionery for application to cakes, cookies, and the like. While Niggemeyer is well suited to containing and dispensing confections, the overall design is not well suited for use with baby food and would not be ideal for quick or convenient storage or transportation in a purse or diaper bag. In particular, the Niggemeyer plastic nozzle is likely to become hung-up when inserted and removed from a crowded bag and is therefore not ideal for this use. Diaz, U.S. Pat. No. 6,347,727 teaches a feeding system for infants wherein, in essence, the handle portion of a specialized spoon is adapted to hold previously prepared food packets items. While this may be helpful in some regard, it requires the transportation of the individual food packaging, which may leak or rupture when placed in a crowded purse, diaper bag, or other similar environment. Further, Diaz requires the transportation of two objects, the spoon and the packets themselves. Lastly, Diaz requires cleaning of the spoon between uses. Accordingly, Diaz does not adequately address the limitations and problems associated with transportation of food products, particularly where sanitation concerns make it desirable to use the product and immediately dispose of the packaging. Castner, Sr., et al., U.S. Pat. No. 4,888,188 discloses an inexpensive disposable prepackaged spoon and product wherein a flowable food material is extruded onto an attached disposable spoon. Read, U.S. Pat. No. 4,830,222 teaches a disposable combined container and feeding spoon. While Castner and Read overcome the aforementioned sanitation concerns, they still require the use of a spoon, only allow transportation of a relatively limited amount of product, are relatively expensive to manufacture, and are subject to breakage when placed in a crowded bag.

[0004] Other prior art packaging solutions utilize a pouch. For example, Montessisa, et al., U.S. Pat. No. 5,366,295 teaches a flexible package in the form of a tubular bag with a tear-strip for opening the bag. While Montessisa is an improvement, it is not well suited for the travel environment where baby food is typically kept. For example, Montessisa teaches a longitudinal weld in the center of the product. Given the forces encountered in a typical crowded-bag type environment, the central placement of a longitudinal weld is imperfect in that it would lead to rupture, product leakage, or alternatively the need for an excessively large or thick packaging to overcome the inherent structural weakness of a seam in this location. Further, the edges of Montessisa’s product are sharp, which as described above, makes insertion and removal from a bag difficult. Lastly, the outer perimeter of the packaging is convex and bulges outwardly, making the product more difficult to hold in the hand. Lastly, Montessisa is not well adapted for use directly from the package (e.g. squeezing product directly into the mouth of the consumer). Similarly, Voigtman, Sr. et al., U.S. Pat. No. 3,573,926 teaches a packaging product designed for solid foods and not suited packaging liquid or semi-liquid food items. Ogga, et al. U.S. Pat. No. 4,834,245 teaches a pouch including front and rear pouched bodies formed from a laminated film with heat sealed edges. Ogga, et al., is not specifically contoured for easy handling and is substantially rectangular in shape, which is neither the safest nor most comfortable package shape for use with an infant or child, and furthermore is not well suited for easy insertion and removal from a crowded-bag environment.

[0005] Other prior art packaging has focused on shape. For example, Caudle, U.S. Pat. No. 7,018,099, hereby incorporated by reference, teaches a zigzag-shaped pouch formed from flexible web material. Caudle teaches an ergonomically designed pouch which is easily handled. However, Caudle’s zigzag shape and its sharp corners, is less than ideal for easy insertion and removal from a crowded bag environment.

SUMMARY OF THE INVENTION

[0006] The present invention relates to a disposable food packaging, ideal for use in feeding an infant or child. The packaging has rounded corners to permit easy insertion and removal from a crowded diaper bag, purse, or other similar carrying environment. Additionally, the packaging is contoured for easy handling and use. Further, the packaging has smooth corners, which minimize the risk of scratching a child when the contents are expressed into mouth of the consumer. It is therefore a primary object of the present invention to provide an improved disposable food packaging that is particularly well suited for use with child and infant food products. It is a further object of the present invention to provide a product with greater portability than prior art baby food packaging products. It is still a further object of the present invention to provide a safer packaging product that has smooth corners, avoids scratching the infant or child during use, and is thus more comfortable and appropriate. It is yet a further object of the invention to provide a packaging that is compressible and resists dents without rupturing or leaking product and resists mechanical, biological, chemical, and tampering influences. It is still a further object of the present invention to provide a packaging that does not require a
utensil in order to dispense or consume the product within. It is a further object of the present invention to provide a safer, glassless alternative to prior art baby food jars and glass-based products. Additionally, it is a further object of the invention to provide a packaging that is contoured to fit comfortably in a child or adult’s hand. Finally, it is yet another additional object of the present invention to provide a packaging product having smooth corners that facilitate entry into and exit from a crowded purse, diaper bag, or other carrying environment.

[0007] It is intended that any other advantages and objects of the present invention that become apparent or obvious from the detailed description or illustrations contained herein are within the scope of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1 is a perspective view of the packaging.
[0009] FIG. 2 is a front view of the packaging.
[0010] FIG. 3 is a rear view of the packaging.
[0011] FIG. 4 is a top elevation view of the packaging.
[0012] FIG. 5 is a bottom elevation view of the packaging.
[0013] FIG. 6 is a side elevation view of the packaging.
[0014] FIG. 7 is a side elevation view of the packaging.
[0015] FIG. 8 is a perspective view demonstrating the tear strip torn and packaging in the open state.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT AND ALTERNATIVE EMBODIMENTS

[0016] The packaging, as illustrated generally by FIG. 1, comprises an opposed first plastic layer and a second plastic layer sealed to define a package body 5 comprising an upper wall 6, a lower wall 4, and two sides 3. From package body 5, a neck 1 emanates from said upper wall 6 at bend 7. Neck 1 represents an opening from which flowable food contents substantially contained within said package body 5 may be extruded, compressed, or naturally flow from the interior of package body 5. The corners transitioning between upper wall 6, lower wall 4, sides 3, and neck 1 are rounded. Neck 1 is openably sealed, thereby completely sealing said opposed first and second plastic layers of said neck 1 when the package is in the closed state. The opposed plastic layers of neck 1 further include a tear strip 2 so that removal of at least a portion of said strip allows opening of the neck permitting flowable food contents within said package to flow therefrom.

[0017] Referring again descriptively to the drawings, with emphasis on the shape. FIG. 1 depicts a perspective view of the present invention that demonstrates the overall shape of the package and substantially smooth edges. The packaging neck 1 is shaped to define a channel from which product may easily dispensed when tear strip 2 is torn and the packaging is open. FIG. 2 and FIG. 3 depict front and rear views of the product that best illustrate side contouring 3 which is assistive in permitting the user to keep a firm grip on the product while carrying, inserting into a carrying bag, or dispensing product. It should be noted that the degree and extent of side contouring is variable and will depend on the product material and the anticipated needs of the consumer. FIG. 4 is a top view that illustrates neck 1 and a perimeter seam 4 which is formed by thermal welding or heat sealing. Seam 4 is of sufficient thickness to maintain packaging integrity and prevent product leakage, and accordingly, thickness of seam 4 may vary based upon the type and volume of product to be packaged. For example, a more compressible product (e.g., peanut butter) may require a smaller seam when compared to a less compressible product (e.g., solid meat or fruit) that may require a larger seam. FIG. 5 illustrates the product in when viewed from the bottom. FIGS. 6 and 7 demonstrate the product when viewed from the side, although side contouring 3 is not as well appreciated from this view. FIG. 8 demonstrates the packaging in the open state when the topmost portion of neck 1 is pulled creating a tear at tear strip 2; the product may then be squeezed from the package body 5 while being held in the user’s hand and optionally squeezed about side contouring 3. After tear strip 2 is torn, the product may be squeezed into the consumer’s mouth, bowl, or the like. Organizationally, the packaging is divided into the body 5 and the neck 1. The package body is defined as including an upper wall 6, a lower wall 4, and two sides 3. That portion of the packaging, which is shaped upwardly after bend 7, represents neck 1.

[0018] Regarding the composition of the packaging, the present invention packaging may be constructed of food grade plastic the composition of which depending on the product to be packaged. Varied methods for producing a pouch or bag capable of holding foodstuffs are well described in the prior art, and packaging can be comprised from laminates, flexible films, or web materials using form-fill-seal machines or other material suitable for holding consumable food or liquid. As non-limiting examples only, in one embodiment, the packaging is formed of one or two sheets of food grade plastic sealed together. In another embodiment, the packaging is comprised of monoxially or biaxially stretched polyolefin or polyethylene film, including specifically high density, low density, and linear low-density polyethylene. In a further non-limiting example, the packaging may be comprised of polypropylene or oxo-biodegradable plastic. In an alternative embodiment, a composite film is utilized wherein a polyethylene film is laminated on an ordinary cellophane sheet or paper. The present invention may be practiced by any method that produces a liquid-impermeable pouch capable of safely containing consumable food or liquid products that will resist leakage or rupture when subjected to the ordinary forces incident to use, storage, and carriage in a purse, diaper bag, or the like.

[0019] Referring again to FIG. 7. Regarding seam 4, as a non-limiting examples only, in one embodiment, said may be heat-sealed or thermally sealed or sealed in any fashion appropriate for maintaining product integrity within. The package may be sealed together on all sides excluding only the topmost portion of neck 1 which may be left open for subsequent production filling.

[0020] Referring again to FIG. 8, as a non-limiting example, the tear strip may be comprised of polyester/polyethylene laminate composite, the polyethylene layer being in contact with the packaging so that the strip can be applied to the bag by heat sealing or heat welding. Mechanisms for producing a suitable tear strip are known in the prior art and include, an example only, noting closely formed and preferentially directed in a tearing direction parallel with the direction of the molecular orientation of the laminated film as disclosed by Ogba, et al., U.S. Pat. No. 4,834,245 hereby incorporated by reference in its entirety. Another example method for producing a suitable tear strip involves heat welding the strip to the outer surface of a wall of the packaging as disclosed by Montesissa, et al., U.S. Pat. No. 5,566,295; hereby incorporated by reference in its entirety. Other known methods of producing a tear strip include utilizing a line of weakness that...
delineates substantially the entire tearing path and the use of perforations which prevent product leakage before opening. Finally, in an alternative embodiment, tear strip 2 may be omitted altogether and the packaging opened by the user through an alternative means (e.g. sharp instrument).

Regarding the physical attributes of the packaging, in a preferred embodiment, the packaging is not resilient and can deform when compressed without leaking product. In one alternative embodiment, packaging body 5 is comprised of resilient plastic whereby after compression of the packaging and packaging's contents by an external force, the packaging, without leaking, will resume its original shape once the force is removed. The package may be translucent, transparent, opaque, and colored to reflect the product packaged within and aid in restricting penetration of ambient light of varying wavelength, including infrared and ultraviolet frequencies, said light potentially hastening degradation of product within. The packaging may be constructed of a material which may be labeled or subjected to direct printing on the packaging surface. Regarding the preferred or alternative embodiments, the packaging thickness and the degree of resiliency for the alternative embodiment is variable and dependent upon the product to be packaged.

The packaging dimensions are arbitrary, variable, and based upon the product to be packaged and the varied needs of the consumer (e.g. camping, day trip, etc.). However, two non-limiting, exemplar embodiment sizes have been found to be useful. The first, larger, non-limiting example measuring 4.0 inches from the top of neck 1 to the furthest portion of packaging body 5, and 3.25 inches wide from the widest part of packaging body 5 measured straight across. The second, smaller, non-limiting example measuring 3.75 inches from the top of neck 1 to the furthest portion of packaging body 5, and 2.75 inches from the widest part of packaging body 5 measured straight across. The lager non-limiting example may contain 4 ounces of baby food; the smaller example 2.5 ounces. However, it is anticipated that packaging dimensions and product volumes will vary according to the product material itself and the anticipated needs of the consumer.

Although the present invention has been described with reference to the preferred embodiments, it should be understood that various modifications and variations can be easily made by those skilled in the art without departing from the spirit and scope of the invention. Accordingly, the foregoing disclosure should be interpreted as illustrative only and is not to be interpreted in a limiting sense. It is further intended that any other embodiments of the present invention that result from any changes in application or method of use or operation, method of manufacture, shape, size, or material which are not specified within the detailed written description or illustrations contained herein yet are considered apparent or obvious to one skilled in the art are within the scope of the present invention.

What is claimed is:

1. A packaging comprising:
   (a) a first plastic layer;
   (b) a second plastic layer opposing said first plastic layer wherein said first plastic layer and second plastic layers further define, a package body comprising an upper wall, a lower wall, and two sides, wherein said opposed layers defining said package body are sealed together;
   a neck emanating from said upper wall of said opposed plastic layers defining an opening whereby flowable food contents may flow from the interior of said package body through said neck;
   wherein the corners transitioning between upper wall, lower wall, sides, and neck are rounded.

2. The packaging of claim 1, wherein said at least a portion of opposed first and second plastic layers of said neck are sealed.

3. The packaging of claim 2, wherein said opposed plastic layers of said neck further comprise a tear strip whereby removal of at least a portion of said strip allows opening of said sealed neck permitting flowable food contents within said packaging to flow therefrom.

4. The packaging of claim 3, wherein at least one side is contoured.

5. The packaging of claim 3, wherein both sides are contoured.

6. The packaging of claim 1, wherein said plastic layers are comprised of polyolefin film.

7. The packaging of claim 1, wherein said plastic layers are comprised of polyethylene.

8. The packaging of claim 7, wherein said polyethylene is comprised of low-density polyethylene.

9. The packaging of claim 1, wherein said polyethylene is high-density polyethylene.

10. The packaging of claim 1, wherein said polyethylene is comprised of linear low-density polyethylene.

11. The packaging of claim 1, wherein said plastic is comprised of a resilient plastic.

12. The packaging of claim 3, wherein said packaging measures 4.0 inches from the top of neck 1 to the furthest portion of packaging body 5, and 3.25 inches wide from the widest part of packaging body 5 as measured straight across.

13. The packaging of claim 3, wherein said packaging 3.75 inches from the top of neck 1 to the furthest portion of packaging body 5, and 2.75 inches from the widest part of packaging body 5 as measured straight across.

14. A babyfood packaging comprising:
   a first plastic layer; a second plastic layer opposing said first plastic layer wherein said first plastic layer and second plastic layers are sealed together, wherein said opposed plastic layers form a package body having an upper wall, lower wall, and two sides, wherein said plastic layers are further shaped to define a neck emanating from said upper wall, wherein the corners transitioning between said upper wall, lower wall, two sides, and neck are rounded, wherein said sides are inwardly contoured concavely relative to the center of the package's long axis; a tear strip forming a portion of said neck, the strip facilitating tearing of said opposed plastic layers for opening said neck, whereby contents within said package body may flow from the interior of said package body, through said neck, and out of the package.