What is Claimed:

1) An abrasion resistant, multi-layer material for biocontainers, comprising:

a multilayer film, comprising,

an outer strength zone,

a gas impermeable zone adhered to the outer strength zone,

an inner contact zone adhered to the gas impermeable zone,

and a porous substrate attached to the outer strength zone, wherein the porous substrate comprises a nylon polymer and is embedded within the outer strength zone; and further comprising:

a tie resin layer or a polyethylene layer that encapsulates an outer surface of the outer strength zone, wherein the gas impermeable zone comprises an ethylene vinyl alcohol material or a metal foil;

wherein the inner contact zone is formed of a low extractables polyolefin material.

2) The abrasion resistant, multi-layer material of claim 1, wherein the substrate is formed with a polymer backing to adhere the substrate to the film.

3) The abrasion resistant, multi-layer material of claim 1, wherein the substrate is formed with a polymer backing to adhere the substrate to the film, the substrate is formed of a material selected from the group consisting of woven and non-woven fibrous material and the polymer backing of the substrate is selected from the group consisting of polyolefins, polyurethanes and nylons.

4) The abrasion resistant, multi-layer material of claim 1, wherein the substrate is formed of a material selected from the group consisting of woven fibrous material selected from the group consisting of nylon, polyester, aramids, carbon, metal and polyolefins.

5) The abrasion resistant, multi-layer material of claim 1, wherein the substrate is formed of a non-woven fibrous material selected from the group consisting of nylon, polyester, aramids, carbon, metal and polyolefins.

6) The abrasion resistant, multi-layer material of claim 1, wherein the outer strength zone is formed of one or more layers, the gas impermeable zone is formed of one or more layers, and the inner contact zone is formed of one or more layers.

7) The abrasion resistant, multi-layer material of claim 1, wherein the biocontainer comprises an opaque or light blocking material.

8) The abrasion resistant, multi-layer material of claim 7, wherein the substrate or the tie resin layer comprises a light blocking additive including titanium dioxide, zinc oxide, or an organic ultra-violet light blocker.
9) A biocontainer having at least two walls and an inner volume defined by the at least two walls, the biocontainer being formed of the abrasion resistant multi-layer material of claim 1.
10) The biocontainer of claim 9 wherein, wherein the substrate is a porous substrate comprising a material having a higher melting point than the tie resin layer.
11) The biocontainer of claim 9 wherein, wherein the substrate has one or more openings formed in it to provide a device selected from the group consisting of a viewing port and a port.
12) The biocontainer of claim 9 wherein the substrate has one or more elongate openings formed in it to provide a viewing port into the interior of the biocontainer.
13) The biocontainer of claim 9, wherein the biocontainer is a pillow type biocontainer, a 2D type of bag, or a 3D type of bag.

What is claimed

1) A material for biocontainers comprising a multilayered film, the multilayered film having an interior and exterior side,

an abrasion-resistant substrate attached to the interior or the exterior side of the film wherein the substrate comprises:

a polymeric woven fibrous material or a non-woven fibrous material,

a woven fibrous material or a non-woven fibrous material comprising metal fibers,

a woven fibrous material or a non-woven fibrous material comprising glass fibers, or

a woven fibrous material or a non-woven fibrous material comprising carbon fibers;

a polymer backing to attach the substrate to the film, the polymer backing comprising one of polyolefins, polyurethanes and nylons;

an outer protective layer disposed on the outside of the substrate to encapsulate the substrate; and

a gas impermeable layer disposed immediate to the substrate and the other protective layer, the gas impermeable layer comprising ethylene vinyl alcohol, wherein the biocontainer has at least two walls and an inner volume defined by the at least two walls, the biocontainer being formed of the multilayered film.

2) The material of claim 1, wherein the polymeric woven fibrous material or polymeric non-woven fibrous material comprises one of nylon, polyesters, aramids, and polyolefins.

3) The material of claim 1, wherein the outer protective layer comprises polyethylene, polypropylene, nylons, ethylene vinyl acetate (EVA), EVA copolymers, styrene-butadiene polymers, polyesters, polyethylene terepthalate (PET), thermoplastic elastomers (TPEs) and polyurethanes.

4) The material of claim 1, wherein the outer protective layer is a tie resin layer.

5) The material of claim 4, wherein the substrate has a higher melting point than the tie resin layer.

6) The material of claim 1, wherein the biocontainer is a pillow type biocontainer, a 2D type of bag, or a 3D type of bag.

7) The material of claim 1, wherein the multilayered film includes one or more layers of polyethylene and one or more layers of gas impermeable polymers.

8) The material of claim 1, wherein the substrate has one or more openings formed in it to provide a device selected from the group consisting of a viewing port and a port.

9) The material of claim 1, wherein the substrate comprises an opaque or a light blocking material.

10) The material of claim 9, wherein the light blocking material is at least one of titanium dioxide, zinc oxide, or an organic ultra-volet light blocker.