

CLAIMS

What is claimed is:

1. A dressing for use with negative-pressure treatment, the dressing comprising:
 - a cover comprising a non-porous film;
 - a manifold comprising foam adhered to the non-porous film; and
 - a fluid control layer comprising a liquid-impermeable material adhered to the manifold;wherein the manifold and the fluid control layer each have an exposed perimeter, and wherein the cover, the manifold, and the fluid control layer are coextensive.
2. The dressing of claim 1, further comprising a fluid port coupled to the cover and fluidly coupled to the manifold through the cover.
3. The dressing of claim 1, further comprising an attachment device configured to seal the exposed perimeter of the cover, the manifold, and the fluid control layer.
4. The dressing of claim 1, wherein the fluid control layer comprises a plurality of fluid restrictions, and further comprising a gel layer having a plurality of apertures at least partially aligned with the fluid restrictions.
5. The dressing of claim 4, further comprising a fluid port coupled to the cover and fluidly coupled to the manifold through the cover.
6. The dressing of claim 5, further comprising an attachment device configured to seal the exposed perimeter of the manifold and the fluid control layer.
7. The dressing of any preceding claim, wherein the fluid control layer comprises a hydrophobic film and a plurality of fluid restrictions in the hydrophobic film.
8. The dressing of claim 7, wherein the hydrophobic film has a contact angle with water greater than 90 degrees.
9. The dressing of claim 7, wherein the hydrophobic film is a polyethylene film.

10. The dressing of claim 7, wherein the fluid restrictions comprise a plurality of slots, each of the slots having a length less than 4 millimeters.
11. The dressing of claim 7, wherein the fluid restrictions comprise a plurality of slots, each of the slots having a width less than 2 millimeters.
12. The dressing of claim 7, wherein the fluid restrictions comprise a plurality of slots, each of the slots having a length less than 4 millimeters and a width less than 2 millimeters.
13. The dressing of claim 12, wherein the width is less than 1 millimeter.
14. The dressing of claim 12, wherein the length is less than 3 millimeters and the width is less than 1 millimeter.
15. The dressing of claim 12, wherein the width is at least 0.5 millimeters.
16. The dressing of claim 12, wherein the length is at least 2 millimeters.
17. The dressing of any preceding claim, wherein the fluid control layer comprises a hydrophilic film and a plurality of fluid restrictions in the hydrophilic film.
18. The dressing of claim 17, wherein the hydrophilic film includes polyurethane.
19. The dressing of claim 17, wherein the hydrophilic film has a water contact angle of at least 65 degrees to 90 degrees.
20. The dressing of claim 1, wherein the fluid control layer includes a hydrophobic film laminated to a hydrophilic film.
21. The dressing of claim 1, wherein the fluid control layer includes a hydrophilic surface and a hydrophobic surface obtained via a plasma/corona method.
22. The dressing of claim 7, wherein the fluid restrictions comprise or consist essentially of elastomeric valves in the hydrophobic film, and the elastomeric valves are normally closed.
23. The dressing of claim 22, wherein the elastomeric valves are fenestrations.

24. The dressing of claim 22, wherein the elastomeric valves are slits.
25. The dressing of claim 22, wherein the fluid restrictions comprise a plurality of slits in the hydrophobic film, each of the slits having a length less than 4 millimeters.
26. The dressing of claim 25, wherein the length is less than 3 millimeters.
27. The dressing of one of claim 25 or claim 21, wherein the length is at least 2 millimeters.
28. The dressing of claim 7, wherein the fluid restrictions are coextensive with the hydrophobic film.
29. The dressing of claim 7, wherein the fluid restrictions are coextensive with the manifold.
30. The dressing of claim 7, wherein the non-porous film and the hydrophobic film are laminated to the manifold.
31. The dressing of claim 1, wherein the manifold comprises polymer foam.
32. The dressing of claim 1, wherein the manifold comprises polyurethane ether foam.
33. The dressing of claim 1, wherein the manifold comprises open-cell foam.
34. The dressing of claim 1, wherein the manifold comprises reticulated foam.
35. The dressing of claim 1, wherein the manifold comprises reticulated polymer foam.
36. The dressing of claim 1, wherein the manifold comprises reticulated polyurethane ether foam.
37. The dressing of claim 1, wherein the manifold comprises reticulated foam having a free volume of at least 90%.
38. The dressing of claim 1, wherein the manifold comprises porous foam having an average pore size in a range of 400-600 microns.
39. The dressing of claim 1, wherein the manifold has a thickness less than 7 millimeters.

40. The dressing of claim 1, wherein the manifold has a thickness in a range of 2 millimeters to 7 millimeters.
41. The dressing of claim 1, wherein the manifold is hydrophobic.
42. The dressing of claim 7, wherein the fluid restrictions are distributed across the hydrophobic film in a uniform pattern.
43. The dressing of claim 7, further comprising:
a layer of hydrophobic gel adhered to the hydrophobic film; and
a plurality of apertures in the layer of hydrophobic gel.
44. The dressing of claim 7, further comprising:
a layer of hydrophobic gel adhered to the hydrophobic film; and
a plurality of apertures in the layer of hydrophobic gel;
wherein substantially all of the plurality of apertures are aligned with at least one of the fluid restrictions.
45. The dressing of claim 43, wherein the hydrophobic gel has a hardness of between 5 Shore OO and 80 Shore OO.
46. The dressing claim 43, wherein the hydrophobic gel is a silicone gel.
47. The dressing of claim 46, wherein the silicone gel has an area density less than 300 grams per square meter.
48. The dressing of claim 46, wherein the silicone gel comprises a bonded silicone.
49. A dressing for use with negative-pressure treatment, the dressing comprising:
a cover comprising a non-porous film;
a manifold comprising foam adhered to the non-porous film;
a hydrophobic film comprising a liquid-impermeable material adhered to the manifold;
a plurality of fluid restrictions in the hydrophobic film adjacent to the manifold;
a silicone layer adjacent the hydrophobic film; and

a plurality of apertures in the silicone layer,
wherein the cover, the manifold, the hydrophobic film, and the silicone layer each
have an exposed perimeter, and wherein the cover, the manifold, and the
hydrophobic film are coextensive.

50. The dressing of claim 49, further comprising a fluid port coupled to the cover and fluidly coupled to the manifold through the cover.
51. The dressing of claim 49, further comprising an attachment device configured to seal the exposed perimeter of the cover, the manifold, the hydrophobic film, and the silicone layer.
52. The dressing of claim 49, wherein the plurality of apertures are at least partially aligned with the fluid restrictions.
53. The dressing of claim 49, wherein the hydrophobic film has a contact angle with water greater than 90 degrees.
54. The dressing of claim 49, wherein the hydrophobic film is a polyethylene film.
55. The dressing of claim 49, wherein the fluid restrictions comprise a plurality of slots, each of the slots having a length less than 4 millimeters.
56. The dressing of claim 49, wherein the fluid restrictions comprise a plurality of slots, each of the slots having a width less than 2 millimeters.
57. The dressing of claim 49, wherein the fluid restrictions comprise a plurality of slots, each of the slots having a length less than 4 millimeters and a width less than 2 millimeters.
58. The dressing of claim 49, wherein the fluid restrictions comprise or consist essentially of elastomeric valves in the hydrophobic film, and the elastomeric valves are normally closed.
59. The dressing of claim 58, wherein the elastomeric valves are fenestrations.
60. The dressing of claim 58, wherein the elastomeric valves are slits.

61. The dressing of claim 49, wherein the fluid restrictions comprise a plurality of slits in the hydrophobic film, each of the slits having a length less than 4 millimeters.
62. The dressing of claim 49, wherein the fluid restrictions are coextensive with the hydrophobic film.
63. The dressing of claim 49, wherein the fluid restrictions are coextensive with the manifold.
64. The dressing of claim 49, wherein the manifold comprises polymer foam.
65. The dressing of claim 49, wherein the manifold comprises polyurethane ether foam.
66. The dressing of claim 49, wherein the manifold comprises open-cell foam.
67. The dressing of claim 49, wherein the manifold comprises reticulated foam.
68. The dressing of claim 49, wherein the manifold comprises reticulated polymer foam.
69. The dressing of claim 49, wherein the manifold comprises reticulated polyurethane ether foam.
70. A dressing for use with negative-pressure treatment, the dressing comprising:
a cover comprising a non-porous film;
a manifold comprising foam adhered to the non-porous film;
a tie layer adhered to the manifold;
a hydrophobic film comprising a liquid-impermeable material adhered to the tie layer;
and
a plurality of fluid restrictions in the hydrophobic film;
wherein the cover, the manifold, and the hydrophobic film each have an exposed perimeter, and wherein the cover, the manifold, and the hydrophobic film are coextensive.
71. The dressing of claim 70, further comprising a fluid port coupled to the cover and fluidly coupled to the manifold through the cover.

72. The dressing of claim 70, further comprising an attachment device configured to seal the exposed perimeter of the manifold and the hydrophobic film.
73. The dressing of claim 70, wherein the tie layer comprises a polyurethane film and the hydrophobic film comprises a polyethylene film.
74. A dressing kit for use with negative-pressure treatment, the dressing kit comprising:
- a cover comprising a non-porous film;
 - a manifold comprising foam adhered to the non-porous film;
 - a tissue interface comprising a liquid-impermeable, hydrophobic film adhered to the manifold;
 - a plurality of fluid restrictions in the hydrophobic film adjacent to the manifold;
 - a fluid port coupled to the cover and fluidly coupled to the manifold through the cover;
 - wherein the manifold and the tissue interface each have an exposed edge; and
 - a plurality of attachment devices configured to seal the exposed edge of the manifold and the tissue interface.
75. The dressing kit of claim 74, wherein the hydrophobic film has a contact angle with water greater than 90 degrees.
76. The dressing kit of claim 74, wherein the hydrophobic film is a polyethylene film.
77. The dressing kit of claim 74, wherein the fluid restrictions comprise a plurality of slots, each of the slots having a length less than 4 millimeters.
78. The dressing kit of claim 74, wherein the fluid restrictions comprise a plurality of slots, each of the slots having a width less than 2 millimeters.
79. The dressing kit of claim 74, wherein the manifold comprises polymer foam.
80. The dressing kit of claim 74, wherein the manifold comprises polyurethane ether foam.
81. The dressing kit of claim 74, wherein the manifold comprises open-cell foam.
82. The dressing kit of claim 74, wherein the manifold comprises reticulated foam.

83. The dressing kit of claim 74, wherein the manifold comprises reticulated polymer foam.

84. The dressing kit of claim 74, wherein the manifold comprises reticulated polyurethane ether foam.